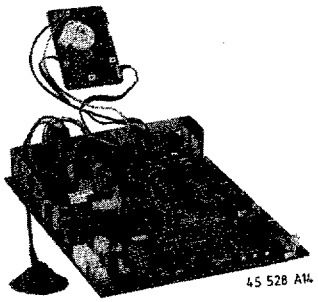
PHILIPS 15AA3330

MODEL

SERVICE MANUAL

Colour television Chassis Anubis A

Service
Service
Service



Service Manual

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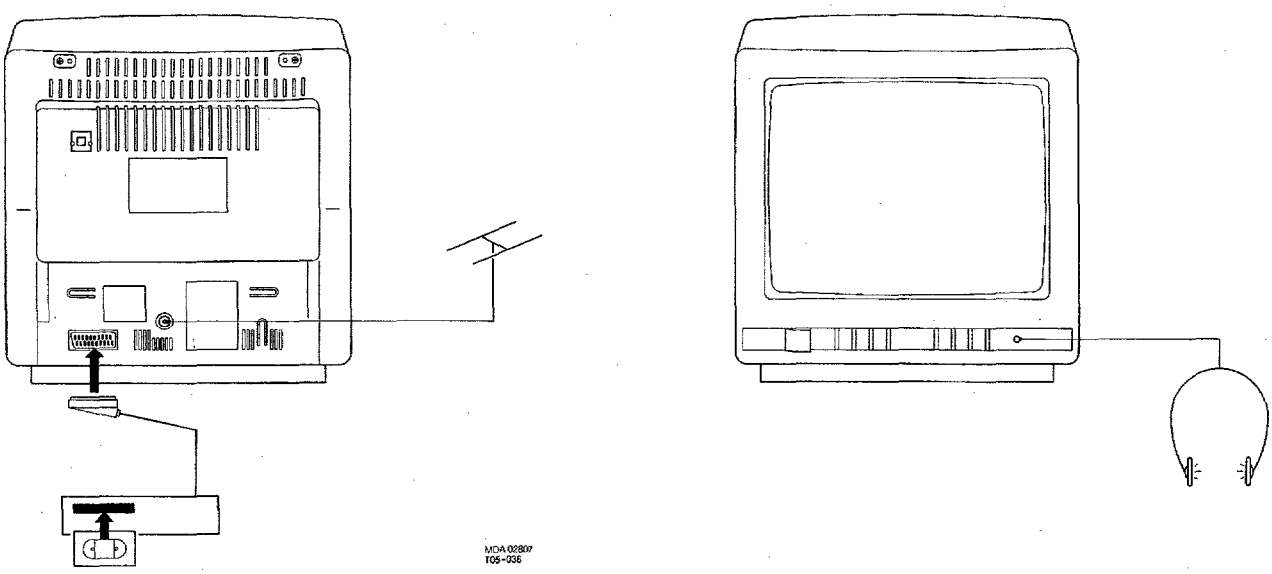
Technical data

Mains voltage	: 220-240 V ± 10 %, 50 Hz ± 5 %
Aerial input impedance	: 75 Ω - coax
Minimum aerial input VHF	: 30µV
Minimum aerial input UHF	: 40µV
Maximum aerial input	: 180mV
Pull-in range colour sync	: ±300Hz
Pull-in range horizontal sync	: ±600Hz
Pull-in range vertical sync	: ±5Hz
Picture tube range	: 14", 15" and 17"

Euro connector:

1 - Audio ⊖→ L 0.5Vrms/≤1kΩ
2 - Audio →⊖ R 0.2 - 2Vrms/≥10kΩ
3 - Audio ⊖→ L 0.5Vrms/≤1kΩ
4 - Audio ⊥
5 - Blue ⊥
6 - Audio →⊖ L 0.2 - 2Vrms/≥10kΩ
7 - Blue 0.7V_{pp}/75Ω
8 - Status CVBS 0 - 2V (L) 10 - 12V (H)
9 - Green ⊥
11 - Green 0.7V_{pp}/75Ω
13 - Red ⊥
15 - Red 0.7V_{pp}/75Ω
16 - Status RGB 0 - 0.4V/75Ω (L) 1 - 3V/75Ω (H)
17 - CVBS ⊖→ ⊥
18 - CVBS →⊖ ⊥
19 - CVBS ⊖→ 1V_{pp}/75Ω
20 - CVBS →⊖ 1V_{pp}/75Ω
21 - Earth screen

Head phone: 8 - 1000Ω 3.5 mm mini jack



MDA 02807
105-036

Warnings

1. A set to be repaired should always be connected to the mains via a suitable isolating transformer.

2. Safety regulations demand that the set be restored to its original condition and that components identical with the original types be used.
Safety components are marked by the symbol ⚠ .

3. To prevent damage to ICs and transistors any flash-over of the EHT should be avoided.
To prevent damage to the picture tube the method, indicated in Fig. 1, has to be applied to discharge the picture tube. Make use of an EHT probe and a universal meter (position DC-V). Discharge until the reading of the meter is 0V (after approx. 30s).

4. **ESD**
All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD).
Careless handling during repair may reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.
Keep components and tools on the same potential.

5. Together with the deflection unit and the possible multipole unit the flat square picture tubes applied form one whole. The deflection and multipole units have been adjusted optimally in the factory.
Adjustment of these units during repair is thus not recommended.

6. The EHT cable has been bonded in the line output transformer. It can thus not be replaced.

7. Proceed with care when testing the EHT section and the picture tube.

8. Never replace any modules or any other parts while the set is switched on.

9. Wear safety goggles during replacement of the picture tube.

10. Use plastic instead of metal alignment tools.
This in order to preclude short-circuit or to prevent a specific circuit from being rendered unstable.

Remarks

1. Service default mode

The service default mode (SDM) is a fixed, defined state the set can be brought in. All controls are in a fixed position and the automatic switch-off feature is disabled. The set accepts all commands via the remote control or the local keyboard.
To switch on the SDM, connect pin 7 of IC7600 to ground and switch on the set with the mains switch.
The SDM can be left by switching the set into stand-by or by switching off the set with the mains switch.

2. The direct voltages and waveforms should be measured relative to the nearest earthing point on the printed circuit board.

3. The direct voltages and oscillograms are measured with a switched on servicce default mode.
Use a colour bar pattern of pattern generator PM5515 as input signal.

4. If necessary, the oscillograms and DC voltages are measured with (⌐|⌐) and without (⌐✕⌐) aerial signal.
Voltages in the power supply section have been measured for both normal operation (⏻) and in the stand-by mode (⏻). These values have been indicated by means of the corresponding symbols.

5. The components, mentioned in the parts lists, are per position completely interchangeable with the components in the set, irrespective of the possible type indications.

6. The picture tube board is provided with printed spark gaps.
Each spark gap is arranged between an electrode of the picture tube and the aquadag coating.

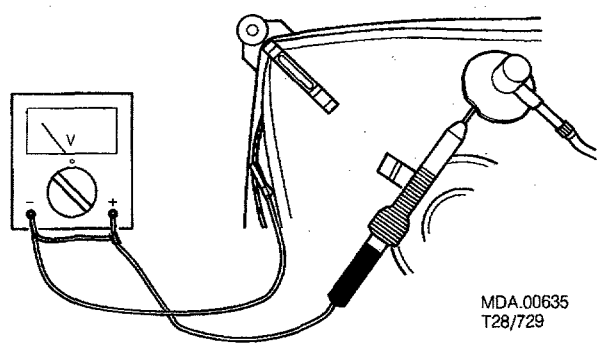


Fig. 1

7. Servicing of SMDs (Surface Mounted Devices)

7.1 General cautions on handling and storage.

a. Oxidation on the SMDs terminals results in poor soldering. Do not handle SMDs with bare hands.
b. Avoid for storage places that are sensitive to oxidation such as places with sulfur or chlorine gas, direct sunlight, high temperatures or a high degree of humidity.
As a result the capacitance or resistance value of the SMDs may be affected.
c. Rough handling of circuit boards containing SMDs may cause damage to the components as well as the circuit boards. Circuit boards containing SMDs should never be bent or flexed. Different circuit board materials expand and contract at different rates when heated or cooled and the components and/or solder connections may be damaged due to the stress. Never rub or scrape chip components as this may cause the value of the component to change. Similarly, do not slide the circuit board across any surface.

7.2 Removal of SMDs

a. Heat the solder (for 2-3 seconds) at each terminal of the chip. Small components can, by means of litz wire and a limited horizontal force, be removed with the soldering iron. They can also be removed with a solder sucker (see Fig. 2) or
b. While holding the SMD with a pair of tweezers take it off gently using the soldering iron's heat applied to each terminal (see Fig. 2B).
c. Remove the excess solder on the solder lands by means of litz wire or a solder sucker (see Fig. 2C).

Caution on removal:

a. When handling the soldering iron, use suitable pressure and be careful.
b. When removing the chip, do not use undue force with the pair of tweezers.
c. The soldering iron to be used (approx. 30 W), must preferably be provided with a thermal control (soldering temperature about 225 to 250°C).
d. The chip, once removed, must **never** be used again.

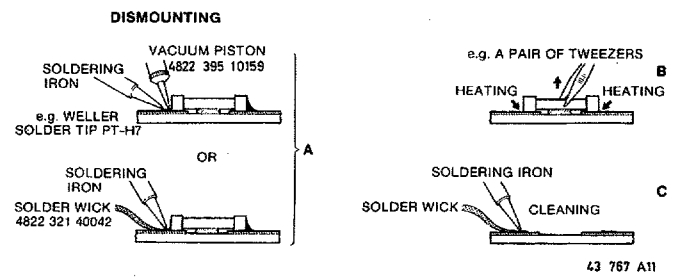


Fig. 2

7.3 Attachment of SMDs

a. Locate the SMD on the solder lands by means of tweezers and solder the component at one side. Ensure that the component is positioned well on the solder lands (see Fig. 3A).
b. Next complete the soldering of the terminals of the component (see Fig. 3B).

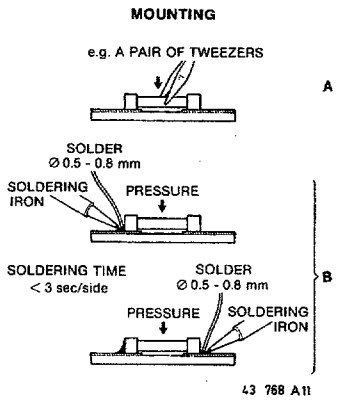


Fig. 3

Caution on attachment:

a. When soldering the SMD terminals, do not touch them directly with the soldering iron. The soldering must be as quick as possible; care must be taken to avoid damage to the terminals and the body itself.
b. Keep the SMD's body in contact with the printed board when soldering.
c. The soldering iron to be used (approx. 30 W) must preferably be provided with a thermal control (soldering temperature about 225 to 250°C).
d. Soldering should not be done outside the solder land.
e. Soldering flux (of rosin) may be used but should not be acidic.
f. After soldering, let the SMD cool down gradually at room temperature.
g. The quantity of solder must be proportional with the size of the solder land. If the quantity is too great, the SMD might crack or the solder lands might be torn loose from the printed board (see Fig. 4).

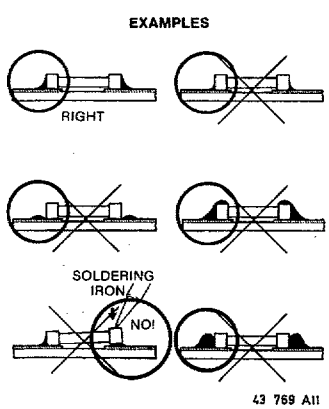


Fig. 4

Mechanical instructions

1. Servicing position

To facilitate troubleshooting and repairing the set, the chassis can, after disconnection of the degaussing coil, be pulled out of the cabinet, turned 180°, and placed behind it (see Fig. 5).

2. Flat square picture tube fixation.

Demounting the picture tube:
Loosen the nuts by turning them with a box spanner hexagon (10 mm) **clockwise**, (see Fig. 6).

Mounting the picture tube:
Turn the spindles **counterclockwise** into the mask with a box spanner hexagon (4 mm).
Locate the picture tube in the mask. The easiest way is placing the cabinet with the front facing down.
Position the picture tube in the middle of the mask.
Turn the spindles **clockwise** until the nut can be fixed onto the spindle.
Turn the nut **counterclockwise** finger-tight against the picture tube fixation.
Turn the spindle **clockwise** until the whole has been fixed tightly (the nut must not turn any more).

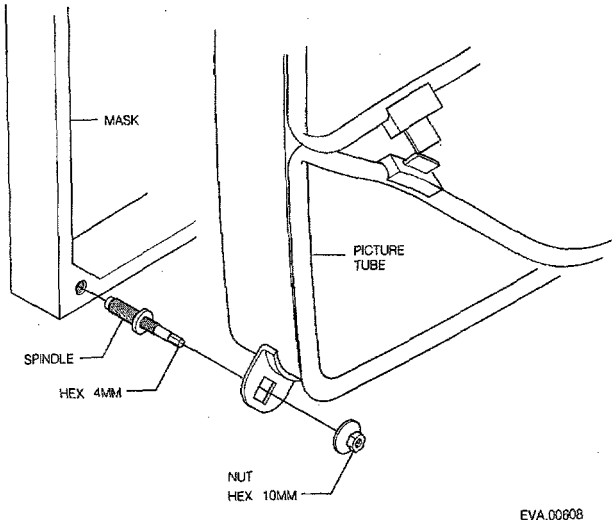
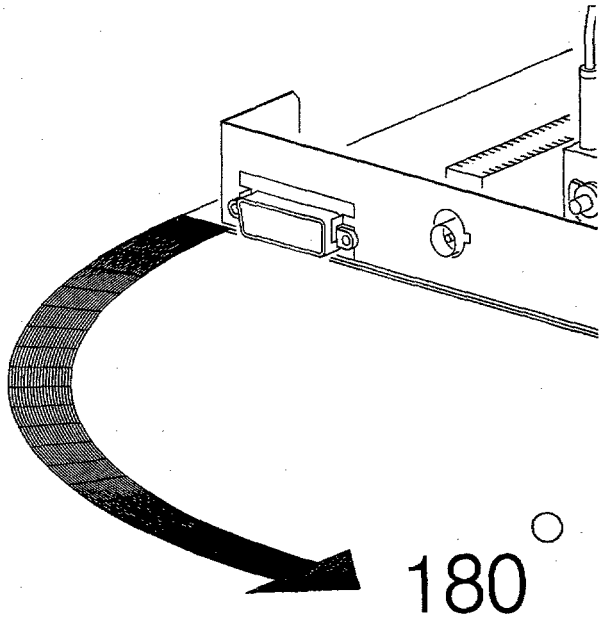


Fig. 6



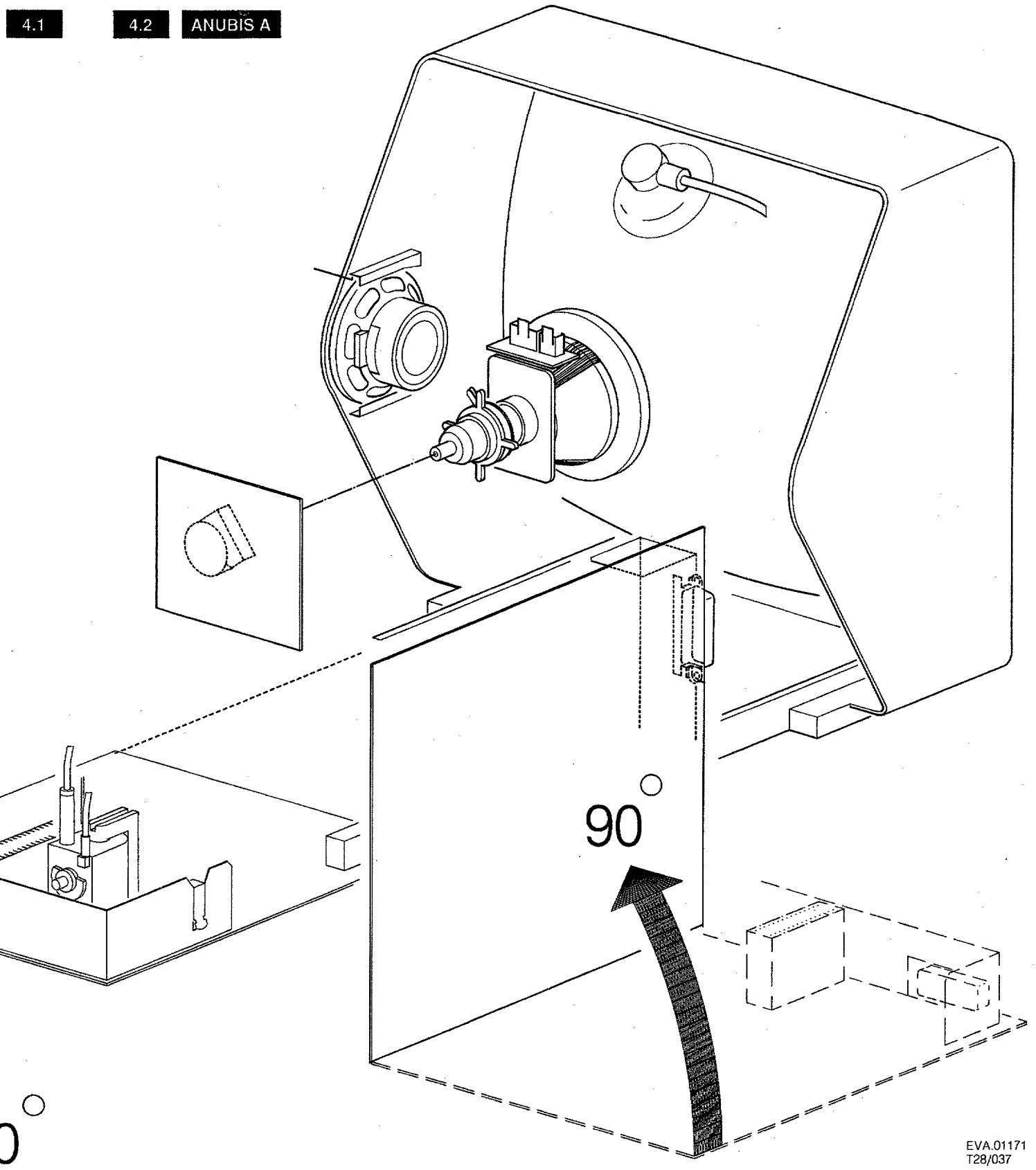
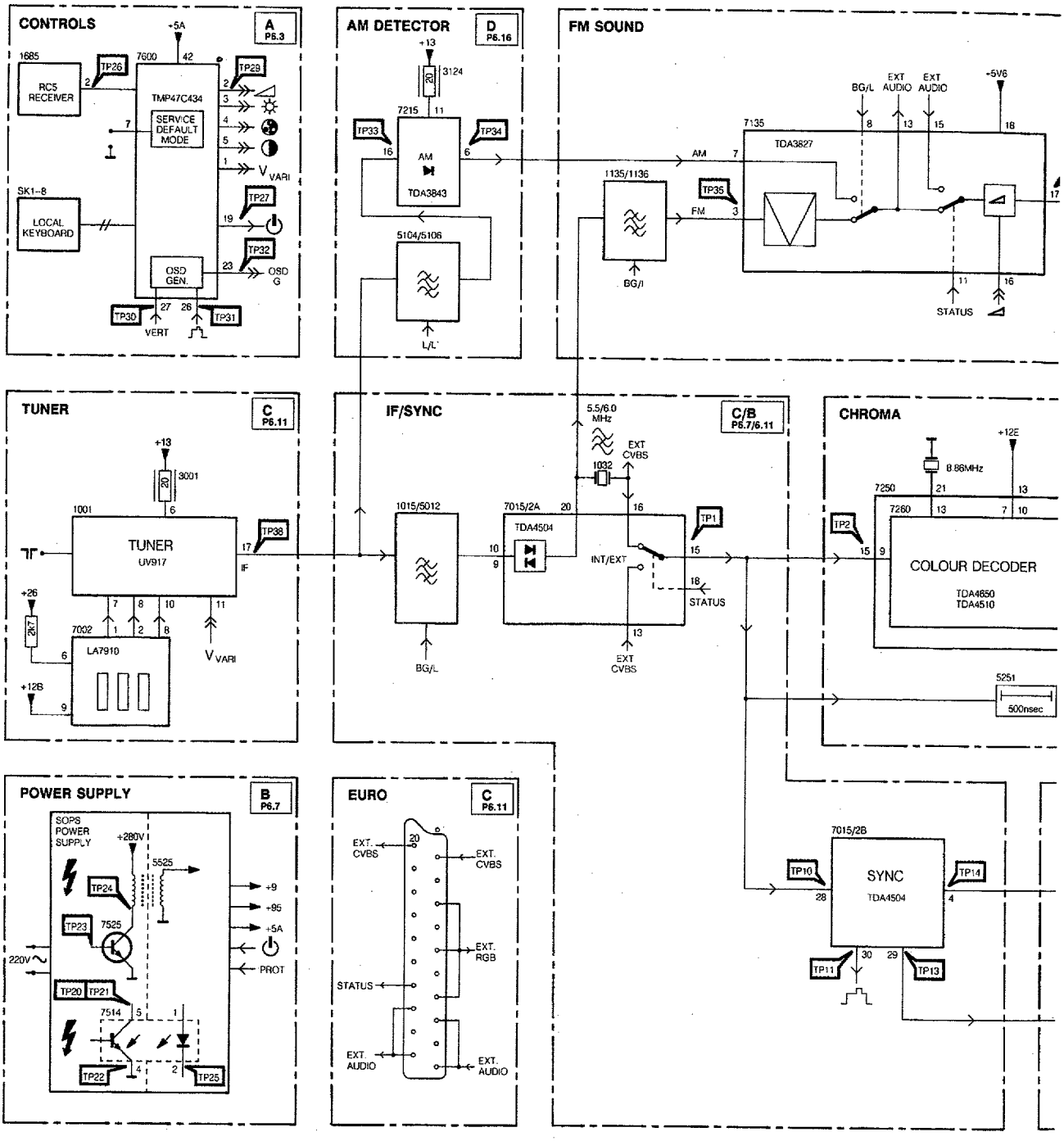


Fig. 5

Blockdiagram Block schaltbild



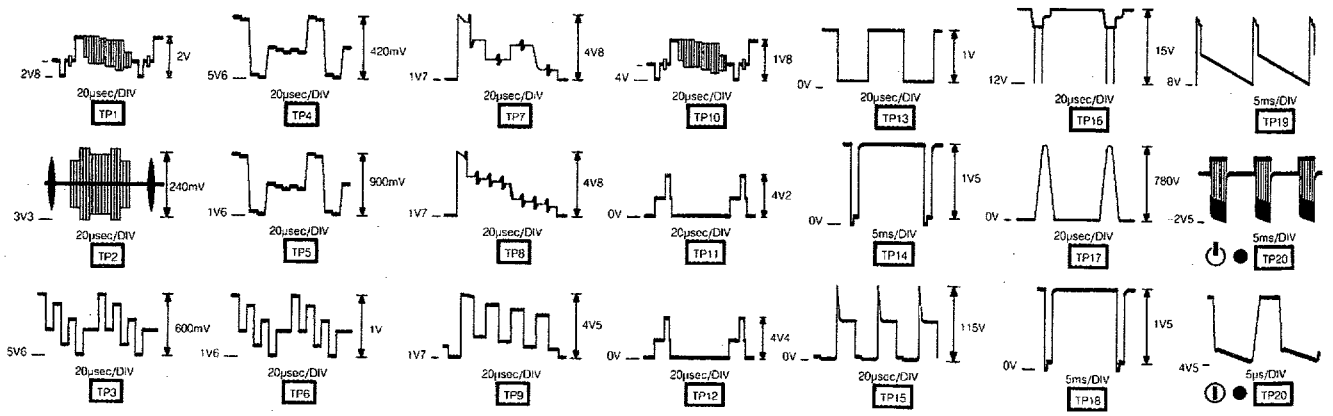
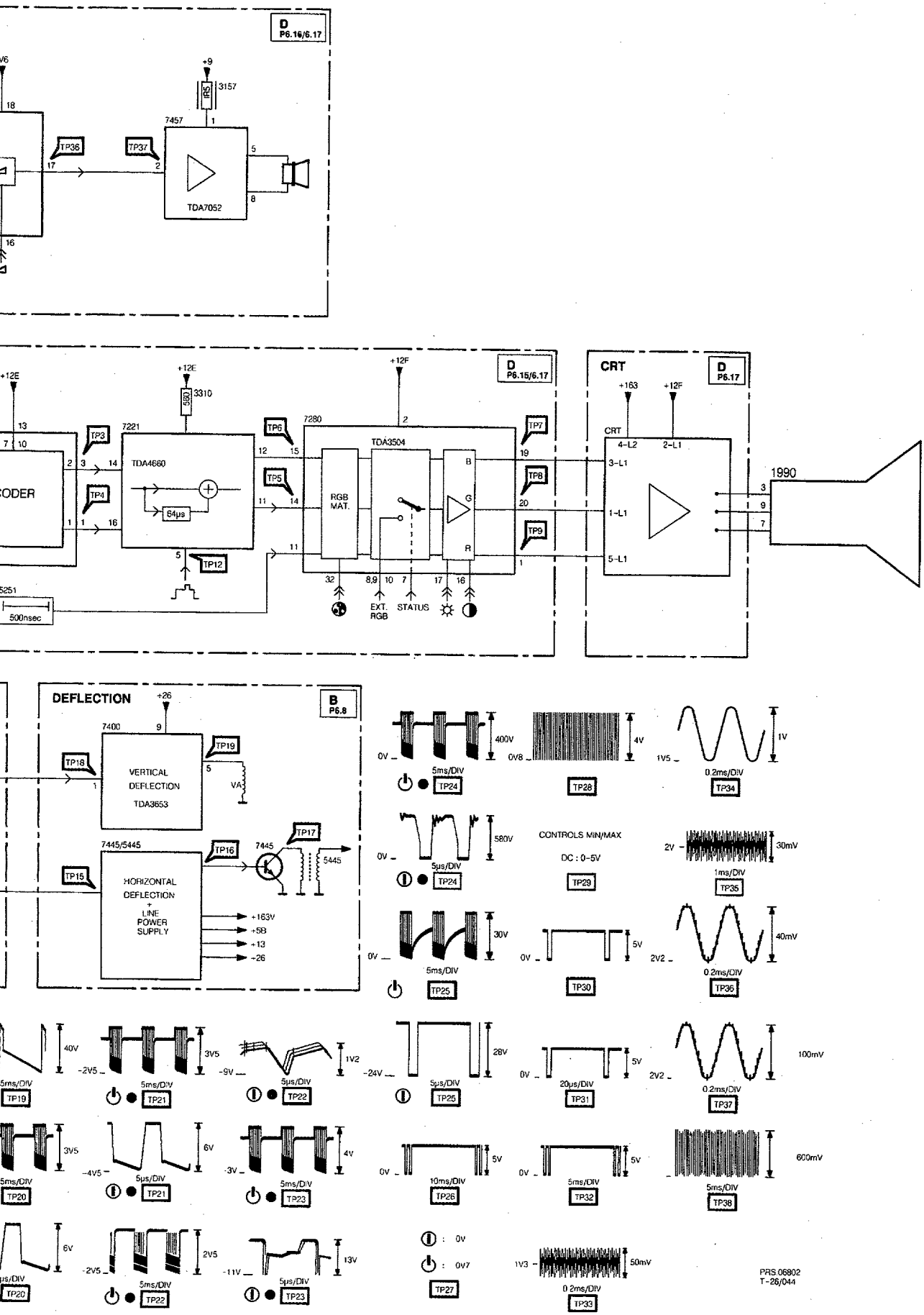


Schéma-bloc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TP37
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D P6.15/6.17
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7221
TDA4660
64µs
TP3
TP4
TP5
TP6
TP12
7280
TDA3504
RGB MAT.
TP7
TP8
TP9
EXT. RGB
STATUS
500nsec
CRT
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+12F
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2-L1
3-L1
1-L1
5-L1
1990
DEFLECTION
B P6.8
+26
7400
VERTICAL DEFLECTION TDA3653
TP18
TP19
7445/5445
HORIZONTAL DEFLECTION + LINE POWER SUPPLY
TP15
TP16
TP17
7445
5445
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+5B
+13
-26
400V
5ms/DIV
TP24
4V
TP28
1V
0.2ms/DIV
TP34
580V
5µs/DIV
CONTROLS MIN/MAX
DC : 0-5V
TP29
30mV
1ms/DIV
TP35
30V
TP25
5V
TP30
40mV
0.2ms/DIV
TP36
40V
TP19
3V5
TP21
1V2
5µs/DIV
TP22
28V
TP25
20µs/DIV
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100mV
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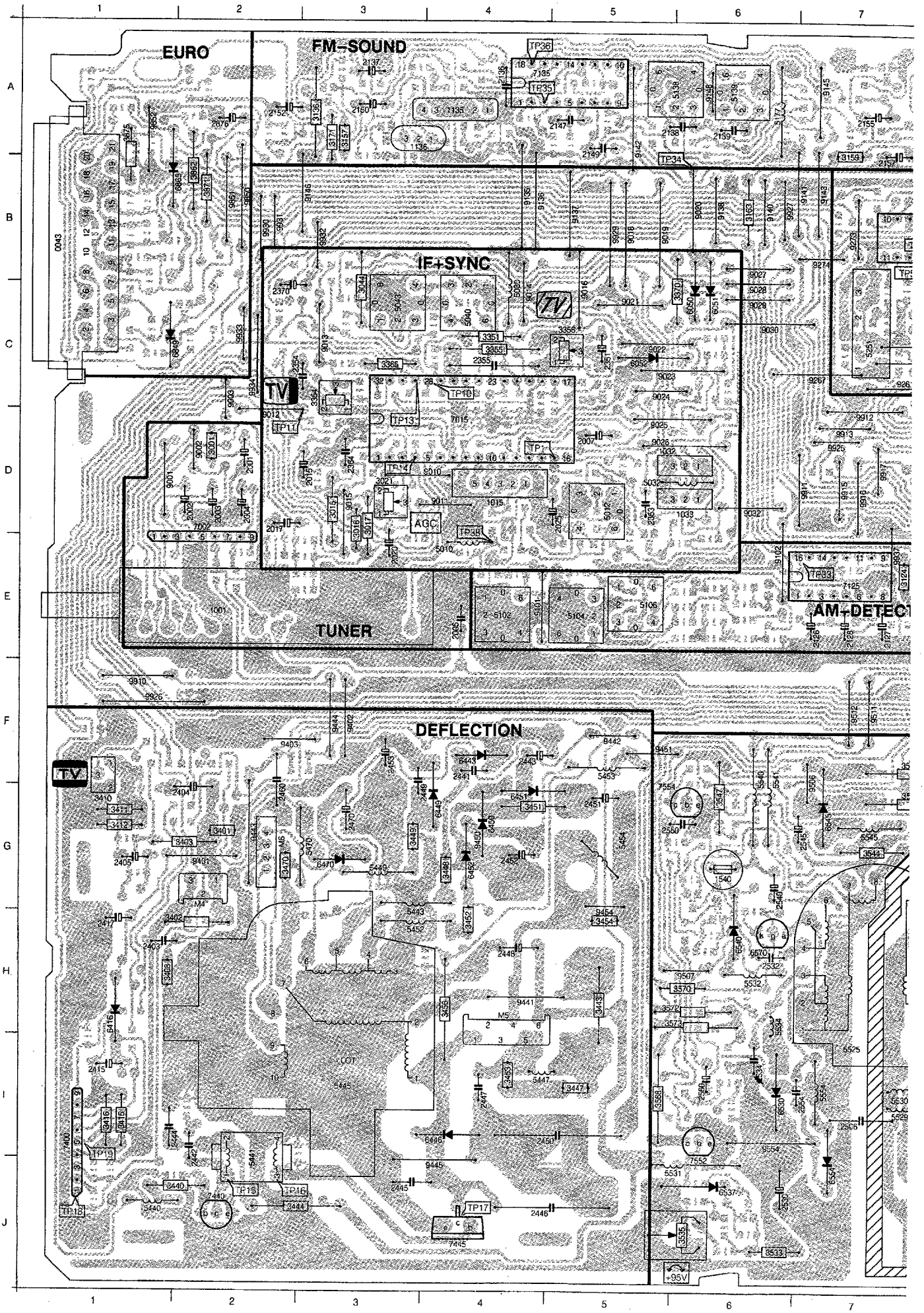
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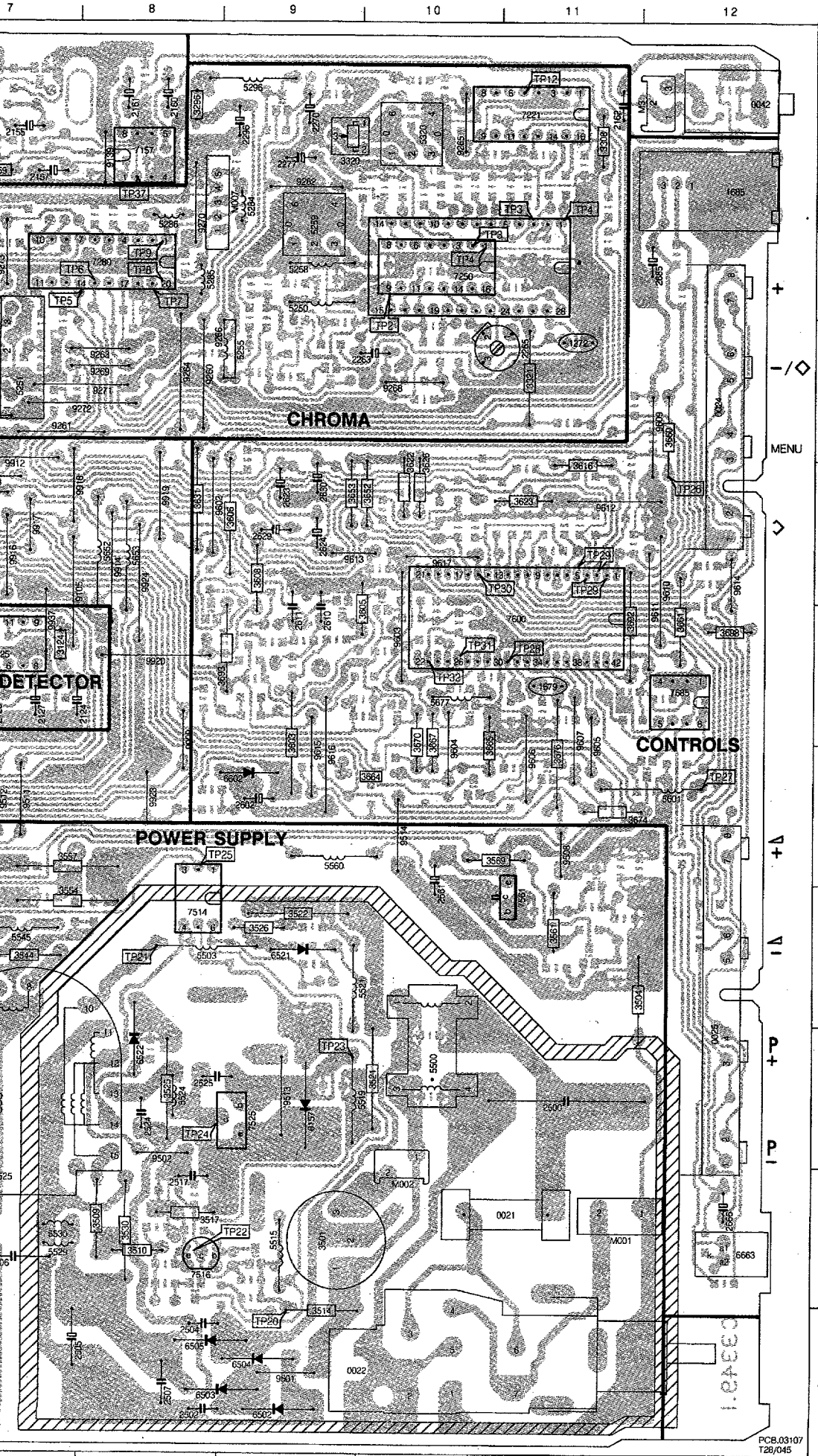
FM-SOUND
IF+SYNC
TUNER
AM-DETEC
DEFLECTION
TV
AGC
LOT
+95V



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M5	H4	3453	I4	7445	J4				
M6	G2	3454	H5	7514	G8				
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1136	A3	3526	G9	9011	D4				
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2001	D2	3547	G6	9016	C5				
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2003	D2	3557	F7	9019	B5				
2004	D2	3561	G11	9020	B6				
2005	E4	3568	I5	9021	C5				
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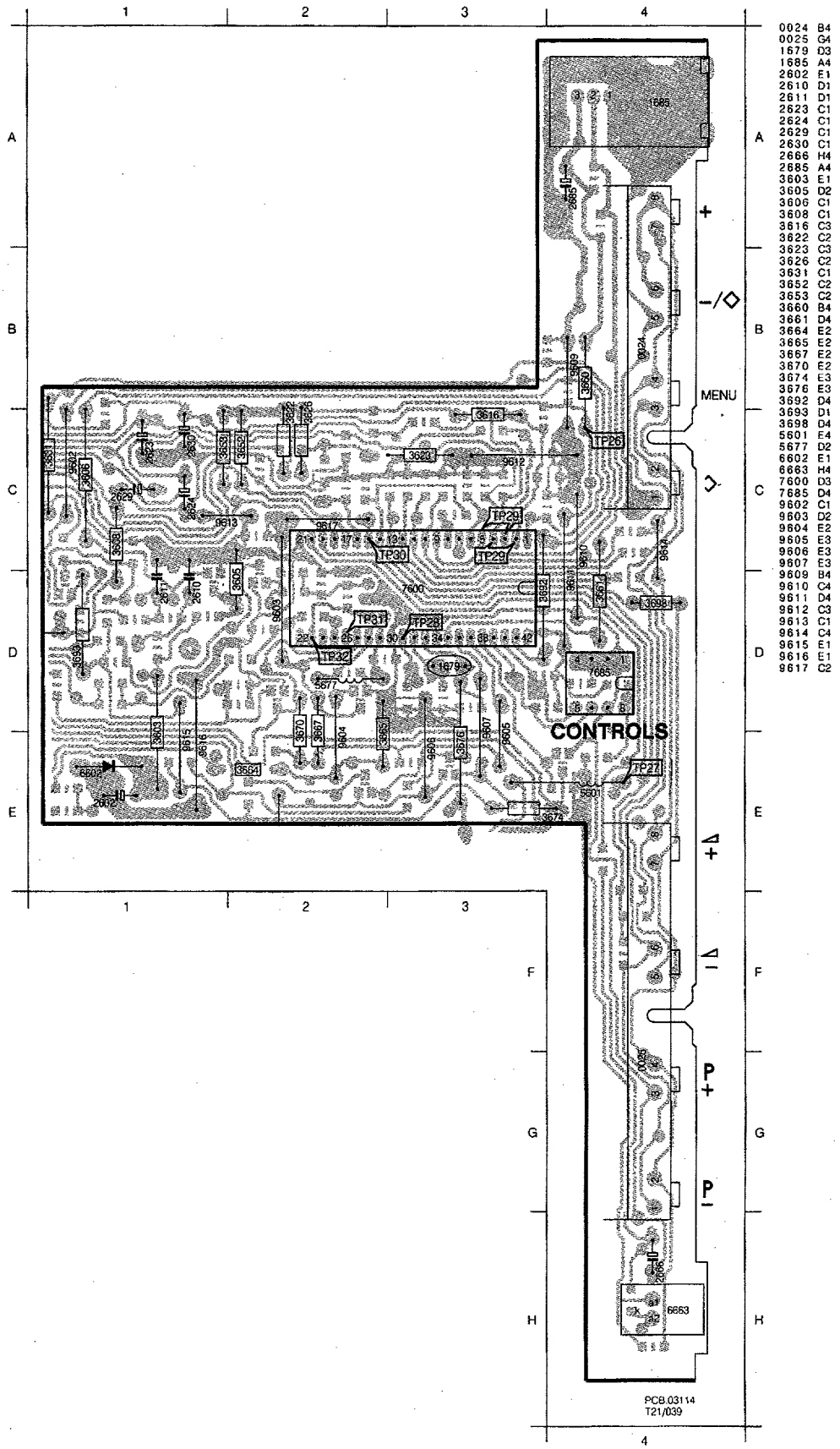

0024 B4
0025 G4
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1685 A4
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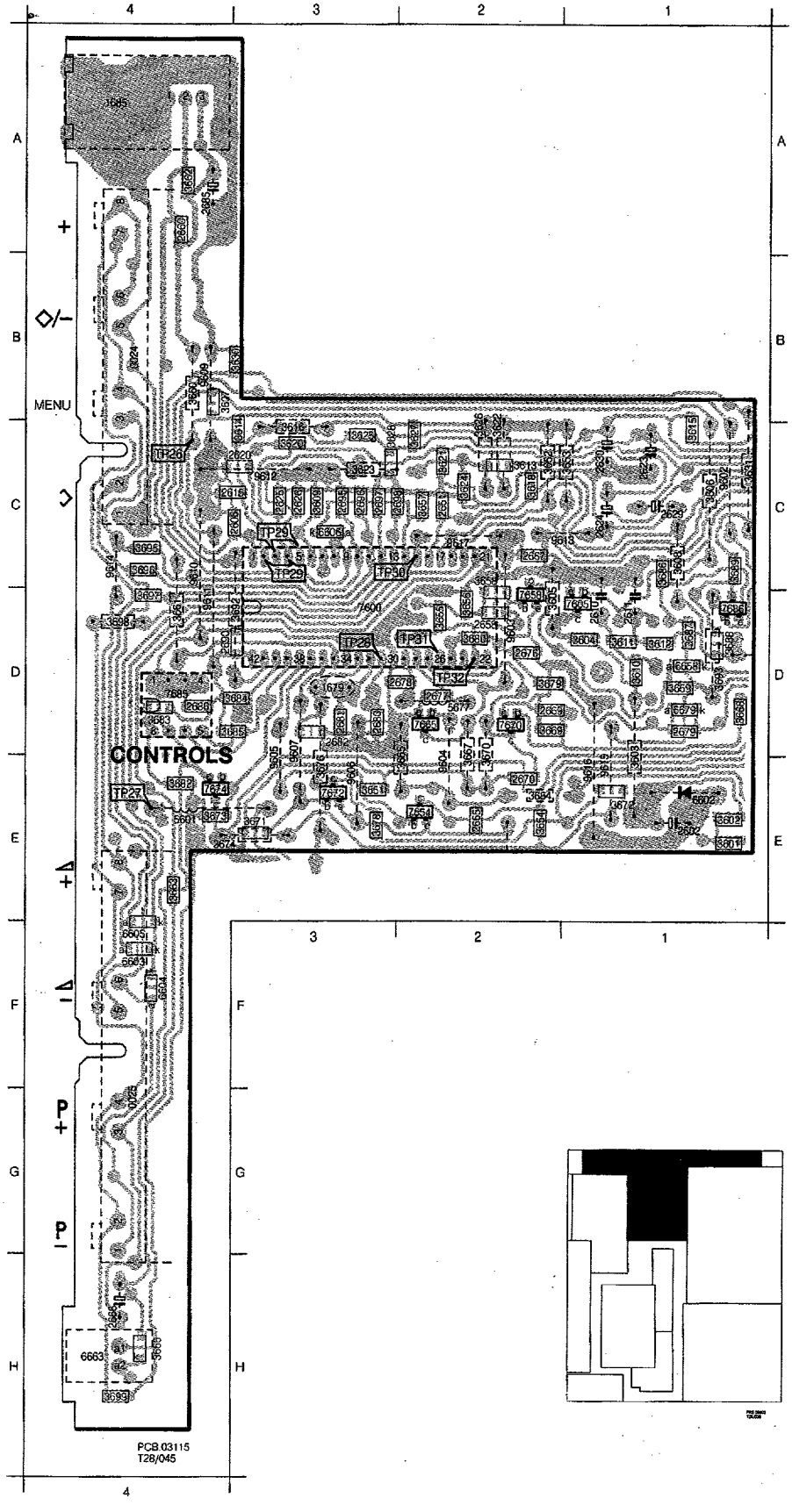
2611 D1
2623 C1
2624 C1
2629 C1
2630 C1
2666 H4
2685 A4
3603 E1
3605 D2
3606 C1
3608 C1
3616 C3
3622 C2
3623 C3
3626 C2
3631 C1
3652 C2
3653 C2
3660 B4
3661 D4
3664 E2
3665 E2
3667 E2
3670 E2
3674 E3
3676 E3
3692 D4
3693 D1
3698 D4
5601 F4
5677 D2
6602 E1
6663 H4
7600 D3
7685 D4
9602 C1
9603 D2
9604 E2
9605 E3
9606 E3
9607 E3
9609 B4
9610 C4
9611 D4
9612 C3
9613 C1
9614 C4
9615 E1
9616 E1
9617 C2

La Commande



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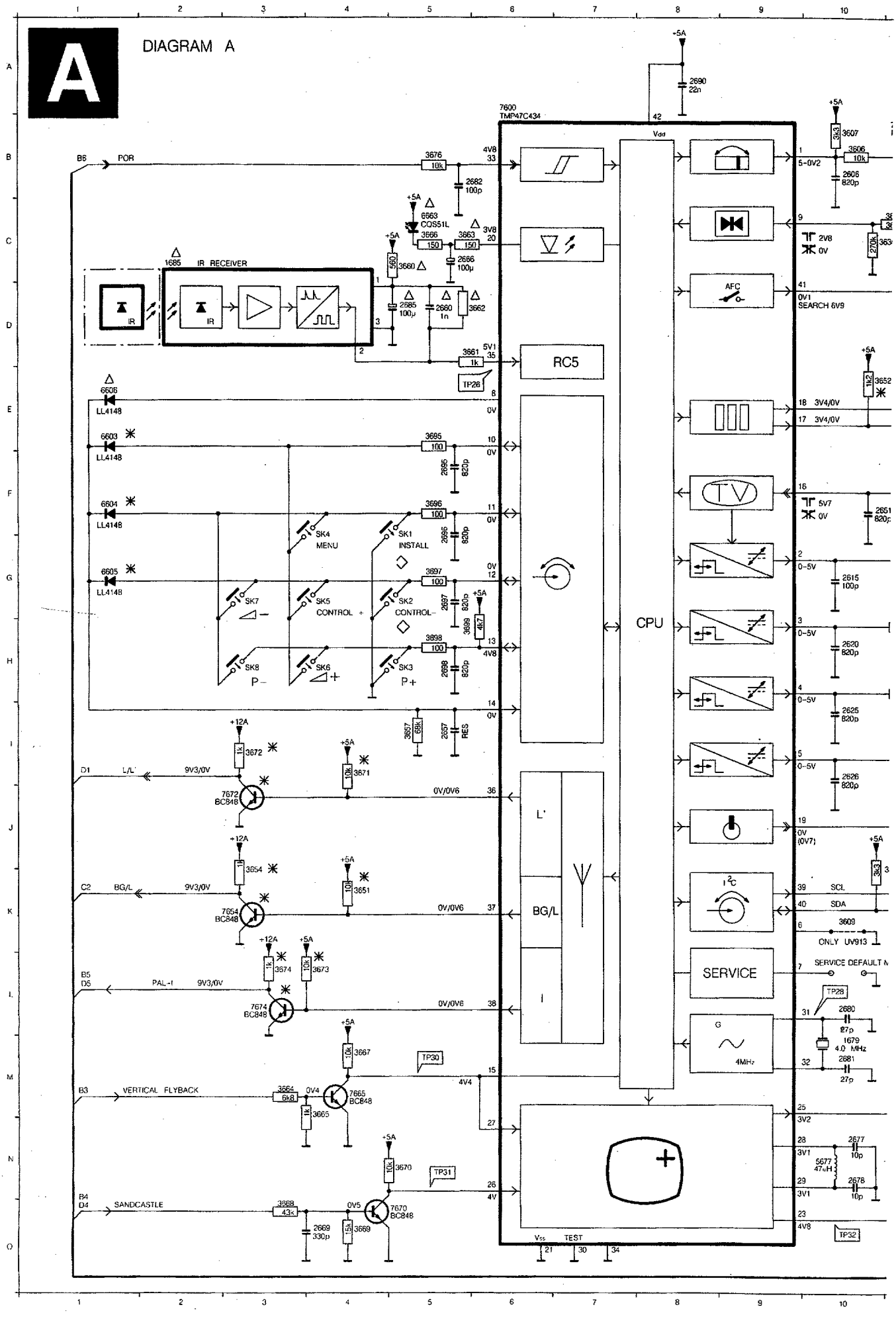
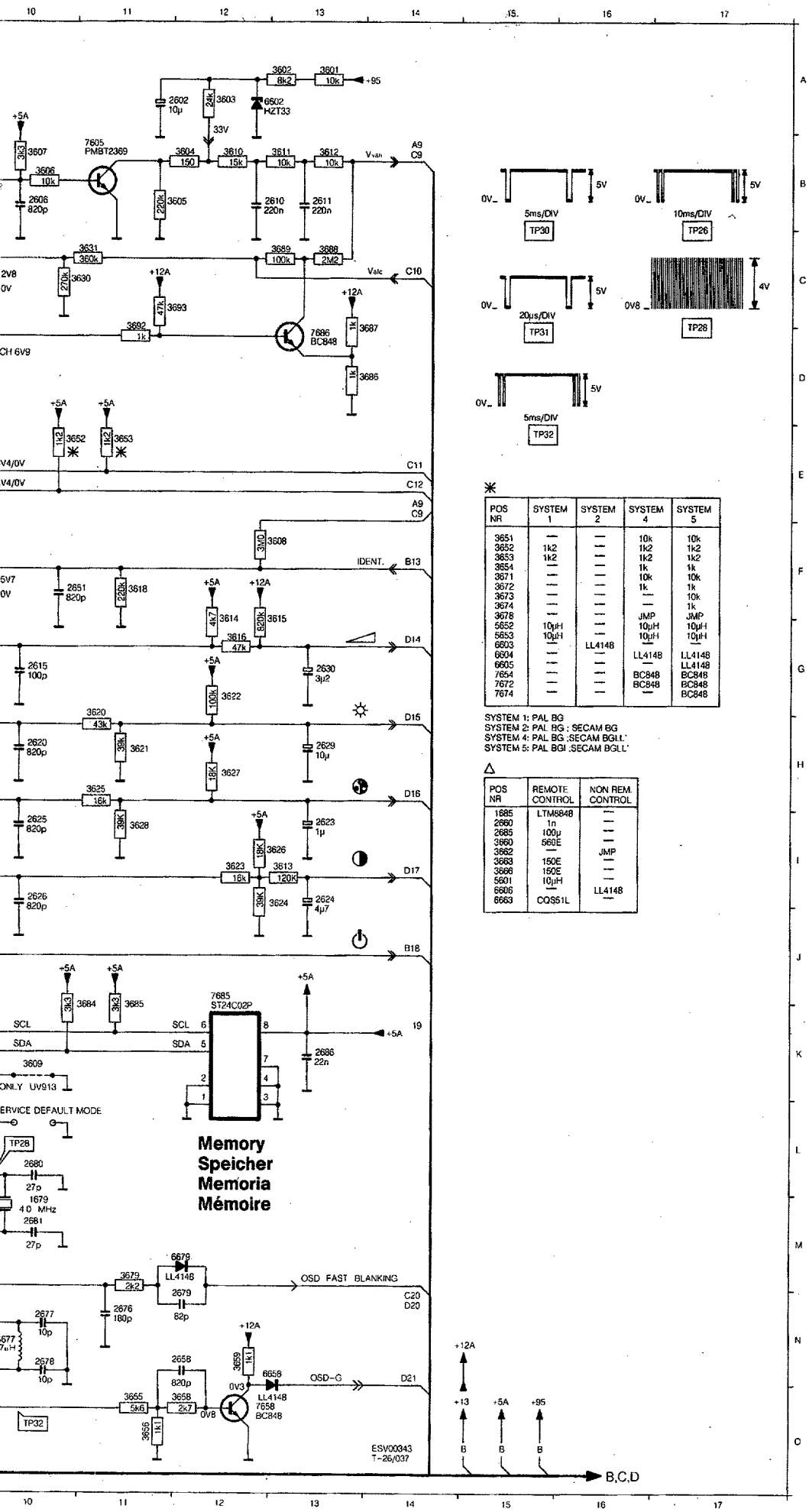
0025	G4	7658	D2
1679	D3	7665	D2
1685	A4	7670	D2
2602	E1	7672	E3
2606	C4	7674	E4
2610	D1	7685	D4
2611	D1	7686	D1
2615	C3	9602	C1
2620	C3	9603	D2
2623	C1	9604	E2
2624	C1	9605	E3
2625	C3	9606	E3
2626	C3	9607	E3
2629	C1	9609	B4
2630	C1	9610	C4
2651	C2	9611	D4
2658	D2	9612	C3
2660	A4	9613	C1
2665	E2	9614	C4
2666	H4	9615	E1
2667	C2	9616	E1
2669	D1	9617	C2
2670	E2		
2676	D2		
2677	D2		
2678	D2		
2679	D1		
2680	D3		
2681	D3		
2682	D3		
2685	A4		
2686	D4		
2690	D4		
2695	C3		
2696	C3		
2697	C3		
2698	C3		
3601	E1		
3602	E1		
3603	E1		
3604	D1		
3605	D2		
3606	C1		
3607	B4		
3608	C1		
3609	C3		
3610	D1		
3611	D1		
3612	D1		
3613	C2		
3614	C4		
3615	C1		
3616	C3		
3618	C2		
3620	C3		
3621	C2		
3622	C2		
3623	C3		
3624	C2		
3625	C3		
3626	C2		
3627	C2		
3628	C3		
3630	B4		
3631	C1		
3651	E3		
3652	C2		
3653	C2		
3654	E2		
3655	D2		
3656	D2		
3657	C2		
3658	C2		
3659	D1		
3660	B4		
3661	D4		
3662	A4		
3663	E4		
3664	E2		
3665	E2		
3666	H4		
3667	E2		
3668	D1		
3669	D1		
3670	E2		
3671	E3		
3672	E1		
3673	E4		
3674	E3		
3676	E3		
3678	E3		
3679	D2		
3680	D2		
3682	E4		
3683	D4		
3684	D3		
3685	D3		
3686	C1		
3687	D1		
3688	D1		
3689	C1		
3692	D4		
3693	D1		
3695	C4		
3696	C4		
3697	D4		
3698	D4		
3699	H4		
5601	E4		
5677	D2		
6602	E1		
6603	F4		
6604	F4		
6605	F4		
6606	C3		
6658	D1		
6663	H4		
6679	D1		
7600	D3		
7605	D1		


A
DIAGRAM A
7600
TMP47C434
Vdd
CPU
RC5
IR RECEIVER
POR
SK4 MENU
SK1 INSTALL
SK5 CONTROL +
SK2 CONTROL-
SK8 P-
SK6 +
SK3 P+
SK7 -
L'
BG/L
I
SERVICE
AFC
TV
SCL
SDA
ONLY UV913
SERVICE DEFAULT
VERTICAL FLYBACK
SANDCASTLE
PAL-I
RES
TEST



✳

POS NR	SYSTEM 1	SYSTEM 2	SYSTEM 4	SYSTEM 5
3651	—	—	10k	10k
3652	1k2	—	1k2	1k2
3653	1k2	—	1k2	1k2
3654	—	—	1k	1k
3671	—	—	10k	10k
3672	—	—	1k	1k
3673	—	—	—	10k
3674	—	—	—	1k
3678	—	—	JMP	JMP
5652	10µH	—	10µH	10µH
5653	10µH	—	10µH	10µH
6603	—	LL4148	—	—
6604	—	—	LL4148	LL4148
6605	—	—	—	LL4148
7654	—	—	BC848	BC848
7672	—	—	BC848	BC848
7674	—	—	—	BC848

SYSTEM 1: PAL BG
SYSTEM 2: PAL BG ; SECAM BG
SYSTEM 4: PAL BG ;SECAM BGLL'
SYSTEM 5: PAL BGI ;SECAM BGLL'

△

POS NR	REMOTE CONTROL	NON REM CONTROL
1685	LTM6848	—
2660	1n	—
2685	100µ	—
3660	560E	—
3662	—	JMP
3663	150E	—
3666	150E	—
5601	10µH	—
6606	—	LL4148
6663	CQS51L	—

SK1 G5
SK2 G5
SK3 H5
SK4 G4
SK5 G4
SK6 H4
SK7 G3
SK8 H3
1679 M10
1685 C2
2602 A11
2606 B10
2610 B12
2611 B13
2615 G10
2620 H10
2623 I13
2624 I13
2625 I10
2626 I10
2629 H13
2630 G13
2651 F10
2657 I5
2658 N12
2660 D5
2666 C5
2669 O4
2676 N11
2677 N10
2678 N10
2679 N12
2680 L10
2681 M10
2682 B5
2685 D5
2686 K13
2690 A8
2695 F5
2696 G5
2697 G5
2698 H5
3601 A13
3602 A13
3603 A12
3604 B12
3605 B11
3606 B10
3607 B10
3608 F12
3609 K10
3610 B12
3611 B13
3612 B13
3613 I13
3614 G12
3615 G12
3616 G12
3618 F11
3620 G11
3621 H11
3622 G12
3623 I12
3624 I13
3625 H11
3626 I12
3627 H12
3628 I11
3630 C10
3631 C11
3651 K4
3652 E10
3653 E11
3654 K3
3655 O11
3656 O11
3657 I5
3658 O12
3659 N12
3660 C5
3661 D6
3662 D6
3663 C5
3664 M3
3665 M4
3666 C5
3667 M4
3668 O3
3669 O4
3670 N5
3671 I4
3672 I3
3673 L4
3674 L3
3676 B5
3679 M11
3684 K11
3685 K11
3686 D13
3687 D13
3688 C13
3689 C13
3692 D11
3693 C11
3695 E5
3696 F5
3697 G5
3698 H5
3699 H5
5677 N10
6602 A12
6603 E1
6604 F1
6605 G1
6606 E1
6658 N13
6663 C5
6679 M12
7600 A6
7605 B11
7654 K3
7658 O12
7665 M4
7670 O5
7672 J3
7674 L3
7685 J12
7686 D13

Monocarrier Hauptplatine

M3	A2	2307	B3	3031	C7	3518	J4	5255	C4	7552	J7				
M4	H11	2309	C3	3032	D7	3520	J5	5258	B4	7553	G2				
M5	H9	2310	C3	3033	D7	3521	H3	5259	B4	7554	G8				
M6	G11	2350	D9	3034	D8	3522	G4	5284	B4	7555	G7				
0021	I 2	2351	C8	3035	D7	3523	H4	5285	B5	7556	H7				
0022	J3	2352	D10	3036	C11	3525	H5	5286	B5	7561	G2				
0024	C1	2353	D8	3037	B10	3526	G4	5296	A4	7563	G2				
0025	H1	2354	C11	3038	C8	3530	I 5	5320	A3	7571	H7	A			
0042	A1	2355	C9	3039	D9	3533	J7	5440	J12	7600	E2				
0043	B12	2356	D9	3043	C10	3534	J7	5441	J11	7605	E4				
1001	E11	2359	D10	3044	C10	3535	J7	5443	H10	7654	F3				
1015	D9	2364	D10	3049	C10	3536	J7	5445	I 10	7658	E3				
1032	D8	2366	D10	3050	C7	3544	G6	5447	I 9	7665	E3				
1033	D7	2367	D10	3051	D7	3547	G7	5449	G10	7670	E3				
1135	A9	2368	D10	3101	E7	3549	G7	5452	H10	7672	F2				
1136	A10	2370	C11	3102	E6	3550	G7	5453	F8	7674	F1				
1272	C2	2371	D9	3103	E7	3551	J7	5454	G8	7685	E1				
1540	G7	2401	J12	3116	E7	3552	G7	5470	G10	7686	E5				
1679	E2	2402	H11	3117	E7	3553	J7	5500	H3	7875	A11				
1685	B1	2403	H12	3118	E7	3554	G6	5503	G5	7876	C11				
2001	D11	2404	G11	3119	E7	3555	H7	5515	I 4	9001	D12				
2002	D11	2405	G12	3120	E7	3556	G7	5519	H4	9002	D11				
2003	D11	2413	J12	3124	E6	3557	F6	5521	G4	9003	D11	B			
2004	D11	2414	J12	3127	E7	3558	H6	5524	H5	9010	D9				
2005	E9	2415	I 12	3135	A9	3559	H7	5525	I 6	9011	D9				
2006	E12	2416	I 12	3136	A10	3560	G2	5529	I 6	9012	D11				
2007	D8	2417	H12	3137	A7	3561	G2	5530	I 6	9013	C10				
2009	C8	2440	J11	3138	A8	3562	G2	5531	J7	9014	C9				
2010	E9	2441	F9	3141	A8	3563	G7	5532	H7	9015	D10				
2011	D9	2442	J11	3142	A9	3565	F2	5534	I 7	9016	C8				
2012	E9	2443	F9	3143	A6	3566	G2	5540	G7	9018	B8				
2013	E9	2444	I 12	3148	A8	3567	G2	5541	G7	9019	B8				
2014	E8	2445	J10	3149	A8	3568	I 8	5545	G6	9020	B7				
2015	D10	2446	J9	3150	A10	3569	F2	5554	I 6	9021	C8				
2016	D9	2447	I 9	3151	A8	3570	H7	5560	F4	9022	C8				
2017	E11	2448	H9	3152	A11	3571	H7	5601	F1	9023	C8				
2018	E11	2449	G10	3154	A6	3572	H7	5652	D5	9024	C8	C			
2019	D10	2450	I 8	3155	A6	3573	H7	5653	D5	9025	D8				
2020	E10	2451	G8	3156	A6	3574	I 7	5677	E3	9026	D8				
2021	D10	2452	G9	3157	A10	3591	G7	6014	E8	9027	B7				
2022	D10	2453	F10	3158	A10	3593	F7	6019	E10	9028	C7				
2025	E8	2460	G11	3159	B6	3601	F5	6020	E10	9029	C7				
2026	C10	2465	F11	3160	A1	3602	F5	6034	D8	9030	C7				
2027	E7	2470	G10	3161	A1	3603	F4	6042	C10	9032	D7				
2030	C7	2500	H2	3162	A5	3604	E4	6050	C7	9101	E9				
2037	D9	2501	H3	3163	B7	3605	E4	6051	C7	9102	E7				
2038	D9	2502	J5	3169	A9	3606	D5	6052	C8	9105	E6				
2041	C9	2503	H3	3170	B10	3607	C2	6053	C7	9135	B9				
2043	C9	2504	J5	3171	A10	3608	D4	6115	E7	9136	B9				
2044	C10	2505	J6	3172	A10	3609	D2	6116	E7	9137	B8				
2101	E9	2506	I 6	3173	A9	3610	E4	6119	E7	9138	B7	D			
2102	E9	2507	J5	3175	B7	3611	E4	6120	E7	9139	A5				
2104	E8	2511	I 5	3176	A7	3612	E4	6135	A10	9140	B7				
2110	E8	2514	G5	3251	C6	3613	D3	6157	H4	9141	B7				
2115	E7	2515	G4	3252	C6	3614	D2	6170	A9	9142	B8				
2117	E7	2517	I 5	3253	C6	3615	D4	6172	A7	9143	B6				
2118	E7	2520	G4	3289	C6	3616	D2	6289	C6	9145	A6				
2120	E7	2522	H5	3296	A5	3618	D3	6306	A3	9146	B11				
2124	E6	2523	I 5	3303	B3	3620	D2	6365	C10	9148	A7				
2125	E6	2524	H5	3304	B3	3621	D3	6370	D9	9260	C5				
2126	E6	2525	H5	3305	C4	3622	D3	6415	I 12	9261	C6				
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2128	E6	2532	H7	3307	C2	3624	D3	6443	F9	9263	C5				
2136	A9	2533	J7	3308	A2	3625	D2	6446	I 9	9264	C5				
2137	A10	2534	I 7	3309	A3	3626	D3	6449	G9	9265	A3	E			
2138	A8	2536	J7	3310	A3	3627	D3	6450	G9	9266	C5				
2139	A7	2540	G7	3311	A4	3628	D3	6451	G9	9267	C6				
2140	A8	2545	G6	3312	C4	3630	C2	6452	G9	9268	C3				
2142	B9	2547	G7	3313	C4	3631	D5	6470	G10	9269	C5				
2143	A9	2550	G7	3314	B4	3651	F2	6502	J4	9270	B5				
2145	A9	2553	G5	3315	C4	3652	D4	6503	J5	9271	C5				
2146	A9	2554	I 6	3316	C4	3653	D4	6504	J4	9272	C5				
2147	A8	2555	H7	3317	C4	3654	F3	6505	J5	9273	B6				
2148	A8	2556	G7	3318	C4	3655	E3	6511	I 5	9274	B6				
2149	B8	2560	I 7	3319	A3	3656	E3	6513	G4	9401	G11				
2150	A10	2561	G3	3320	A4	3657	D3	6514	G4	9402	F10				
2152	A11	2562	G6	3321	C2	3658	D3	6515	G7	9403	F11				
2153	A11	2563	G7	3322	C3	3659	E4	6516	G7	9441	H9	F			
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2158	A5	2610	E4	3354	D10	3663	F1	6530	I 7	9445	J9				
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2170	B10	2625	D2	3360	B10	3669	E3	6554	J6	9506	G5				
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2256	C5	2665	F3	3401	G11	3678	F2	6565	F2	9554	I 7				
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2258	B3	2667	D3	3403	G11	3680	E3	6569	H7	9603	E3				
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2260	B4	2670	F3	3405	G12	3683	E1	6573	G6	9605	F2				
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2262	B3	2677	E3	3407	F12	3685	E2	6603	G1	9607	F2				
2263	C3	2678	E3	3408	H12	3686	D4	6604	G1	9609	C1				
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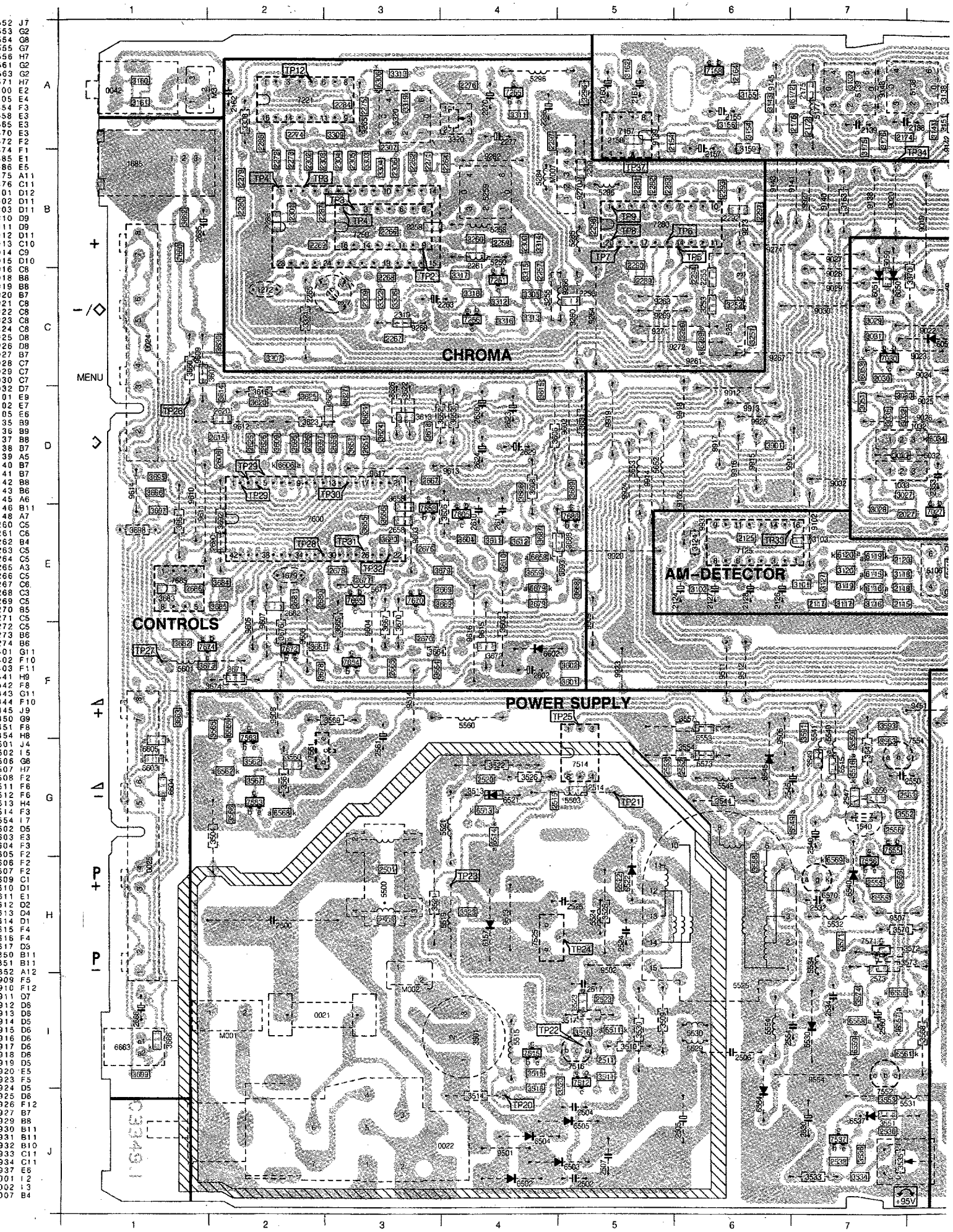
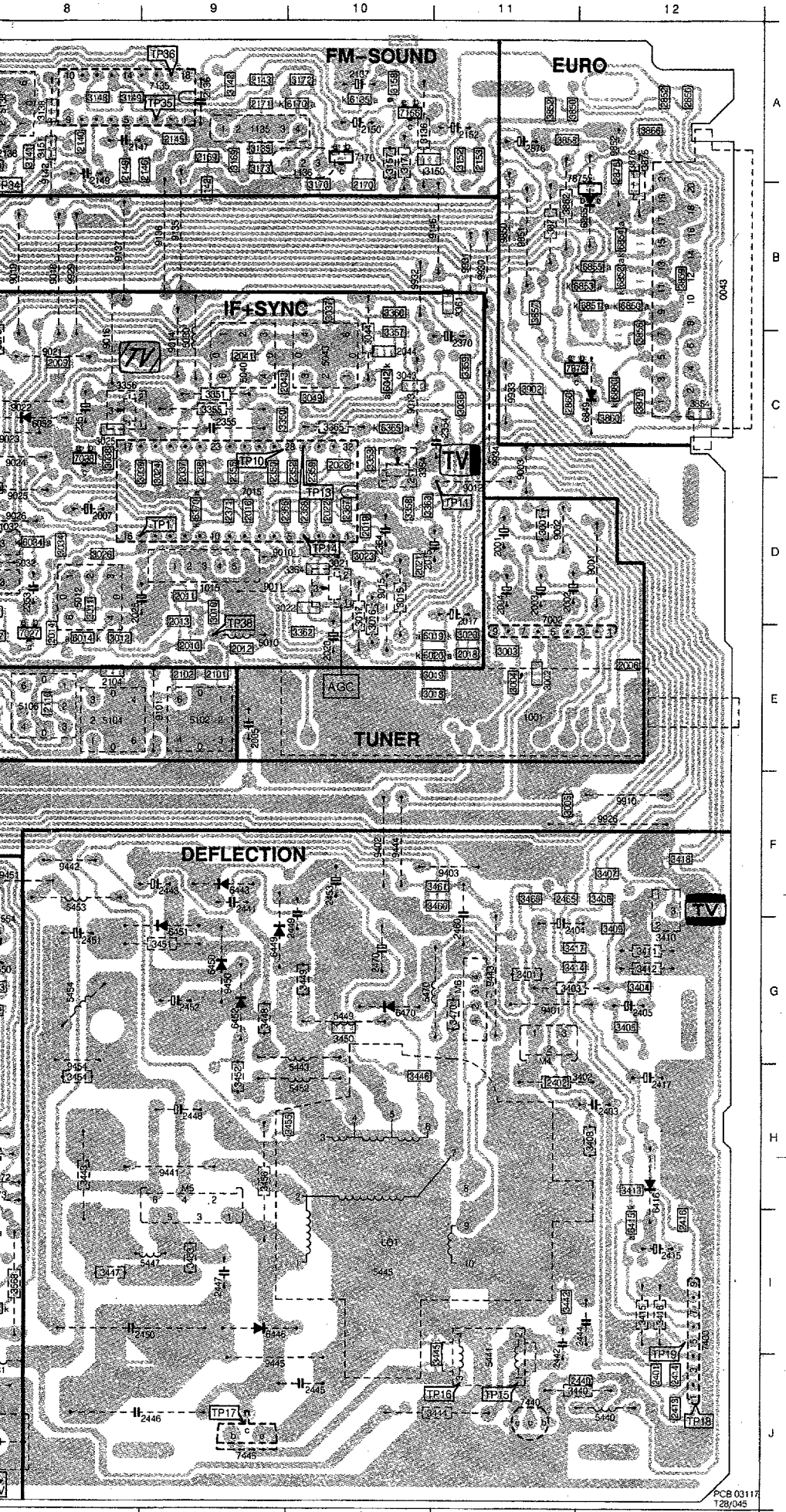
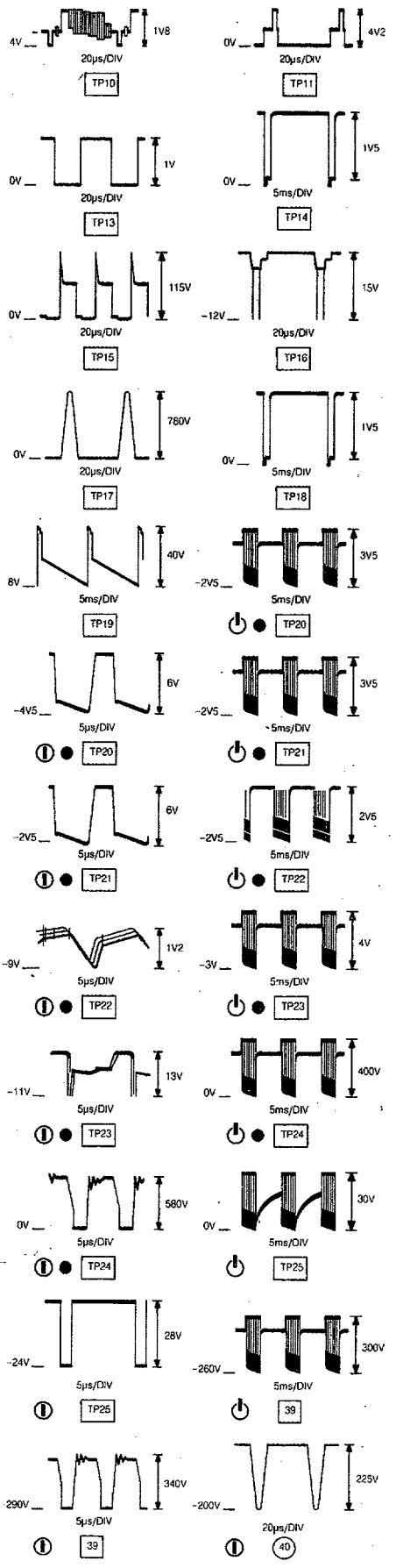
2265	C2	2680	E2	3410	G12	3688	E5	6606	D2	9611	E1				
2266	B3	2681	E2	3411	G12	3689	D5	6658	E4	9612	D2				
2267	C3	2682	E2	3412	G12	3692	E2	6663	I 1	9613	D4	H			
2268	C3	2685	B1	3413	H12	3693	E5	6679	E4	9614	D1				
2269	B2	2686	E1	3414	G11	3695	D1	6849	C12	9615	F4				
2270	A4	2690	E2	3415	I 12	3696	D1	6850	B12	9616	F4				
2271	B3	2695	D2	3416	I 12	3697	E1	6851	B12	9617	D3				
2272	B2	2696	D2	3417	G11	3698	E1	6852	B12	9850	B11				
2273	B2	2697	D2	3418	F12	3699	I 1	6853	B11	9851	B11				
2274	A2	2698	D3	3440	J11	3850	A11	6854	B12	9852	A12				
2275	A3	2850	A12	3442	I 11	3852	A11	6855	B12	9909	F5				
2276	A4	2852	A12	3443	H8	3854	C12	6865	B12	9910	F12				
2277	A4	2860	C11	3444	J10	3856	C12	6880	C12	9911	D7				
2279	B2	2875	A12	3445	J11	3857	B11	7002	D11	9912	D6				
2280	B2	2876	A11	3446	H10	3858	A11	7015	D9	9913	D6				
2281	B5	3001	D11	3447	I 8	3859	B12	7027	E8	9914	D5				
2282	B5	3002	E11	3448	G9	3860	C12	7030	C7	9915	D6	I			
2283	B5	3003	E11	3449	G10	3862	B11	7038	C8	9916	D6				
2284	A3	3004	E11	3450	G10	3866	A12	7125	E6	9917	D6				
2285	B2	3005	F11	3451	G8	3871	B11	7135	A9	9918	D6				
2286	B2	3010	D9	3452	H8	3875	A12	7156	A10	9919	D5				
2287	B2	3011	D8	3453	I 9	3876	A12	7157	A5	9920	E5				
2289	C5	3012	E8	3454	H8	3879	C12	7158	A6	9923	F5				
2290	C5	3015	D10	3455	H10	3901	D6	7170	A10	9924	D5				
2291	B6	3016	E10	3456	H9	3902	C11	7221	A2	9925	D6				
2292	B6	3017	E10	3460	F10	5010	E9	7250	B3	9926	F12				
2293	B6	3018	E10	3461	F10	5012	D8	7251	C4	9927	B7				
2294	C6	3019	E10	3465	F11	5030	C9	7255	A4	9929	B8				
2296	A4	3020	E11	3470	G11	5032	D8	7256	C4	9930	B11				
2297	B4	3021	D10	3501	I 4	5040	C9	7280	B5	9931	B11				
2298	B5	3022	D9	3504	G2	5043	C10	7400	I 12	9932	B10	J			
2299	B5	3023	D10	3509	I 5	5102	E9	7440	J11	9933	C11				
2300	B4	3024	D9	3510	I 5	5104	E8	7445	J9	9934	C11				
2301	B2	3025	C8	3511	I 5	5106	E8	7512	I 5	9937	E6				
2302	B2	3026	D8	3513	G4	5138	A8	7514	G5	M001	I 2				
2303	B3	3027	D7	3514	J4	5139	A7	7515	I 4	M002	I 3				
2304	B3	3028	E7	3515	I 4	5177	A7	7516	I 5	M007	B4				
2305	B3	3029	C7	3516	I 5	5250	B4	7525	H4						
2306	B3	3030	D7	3517	I 5	5251	C6	7537	J7						


CHROMA
AM-DETECTOR
CONTROLS
POWER SUPPLY
MENU
+95V

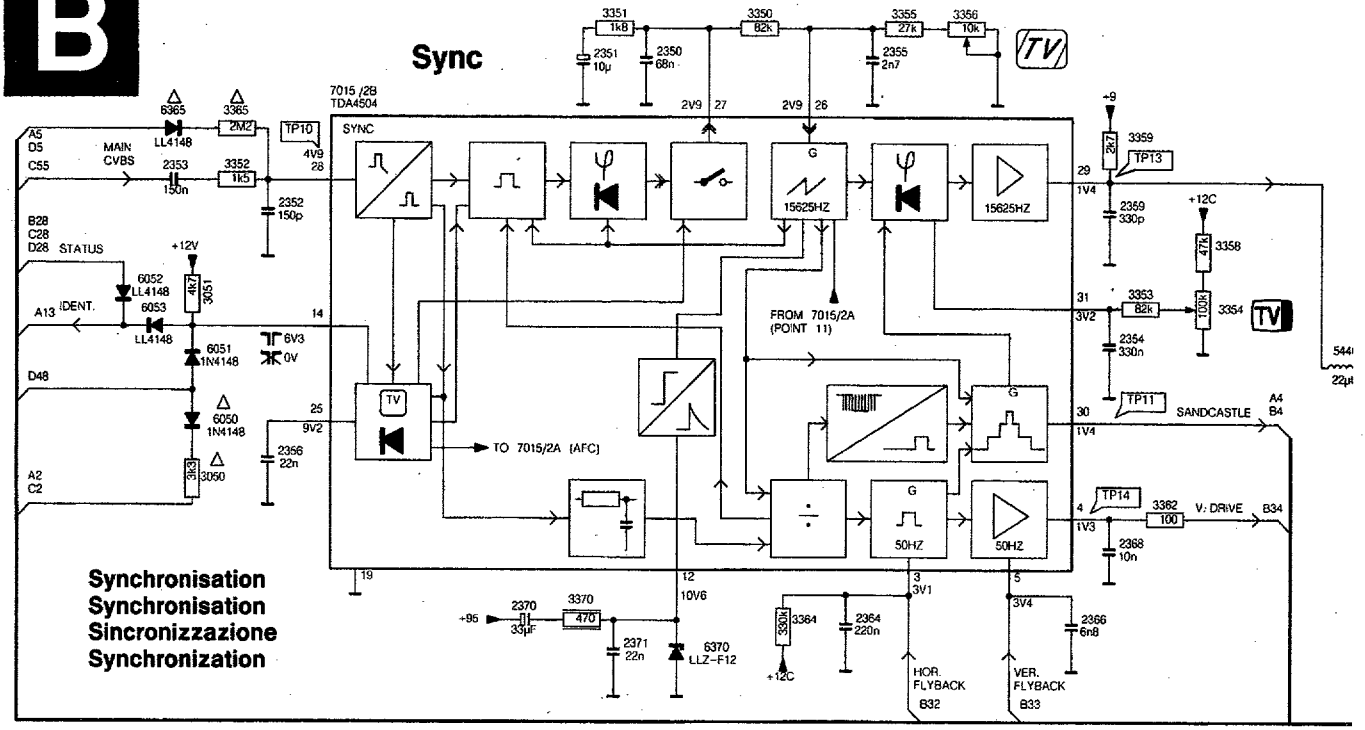

FM-SOUND
EURO
IF+SYNC
TUNER
DEFLECTION
AGC
TV
TP10
TP11
TP13
TP14
TP15
TP16
TP17
TP18
TP19
TP20
TP21
TP22
TP23
TP24
TP25
TP35
TP36
PCB 03117
T28/045


A
4V 1V8 20µs/DIV TP10
0V 4V2 20µs/DIV TP11
B
0V 1V 20µs/DIV TP13
0V 1V5 5ms/DIV TP14
C
0V 115V 20µs/DIV TP15
-12V 15V 20µs/DIV TP16
D
0V 780V 20µs/DIV TP17
0V 1V5 5ms/DIV TP18
E
8V 40V 5ms/DIV TP19
-2V5 3V5 5ms/DIV TP20
F
-4V5 6V 5µs/DIV TP20
-2V5 3V5 5ms/DIV TP21
G
-2V5 6V 5µs/DIV TP21
-2V5 2V5 5ms/DIV TP22
H
-9V 1V2 5µs/DIV TP22
-3V 4V 5ms/DIV TP23
I
-11V 13V 5µs/DIV TP23
0V 400V 5ms/DIV TP24
J
0V 580V 5µs/DIV TP24
0V 30V 5ms/DIV TP25
-24V 28V 5µs/DIV TP25
-260V 300V 5ms/DIV 39
290V 340V 5µs/DIV 39
-200V 225V 20µs/DIV 40

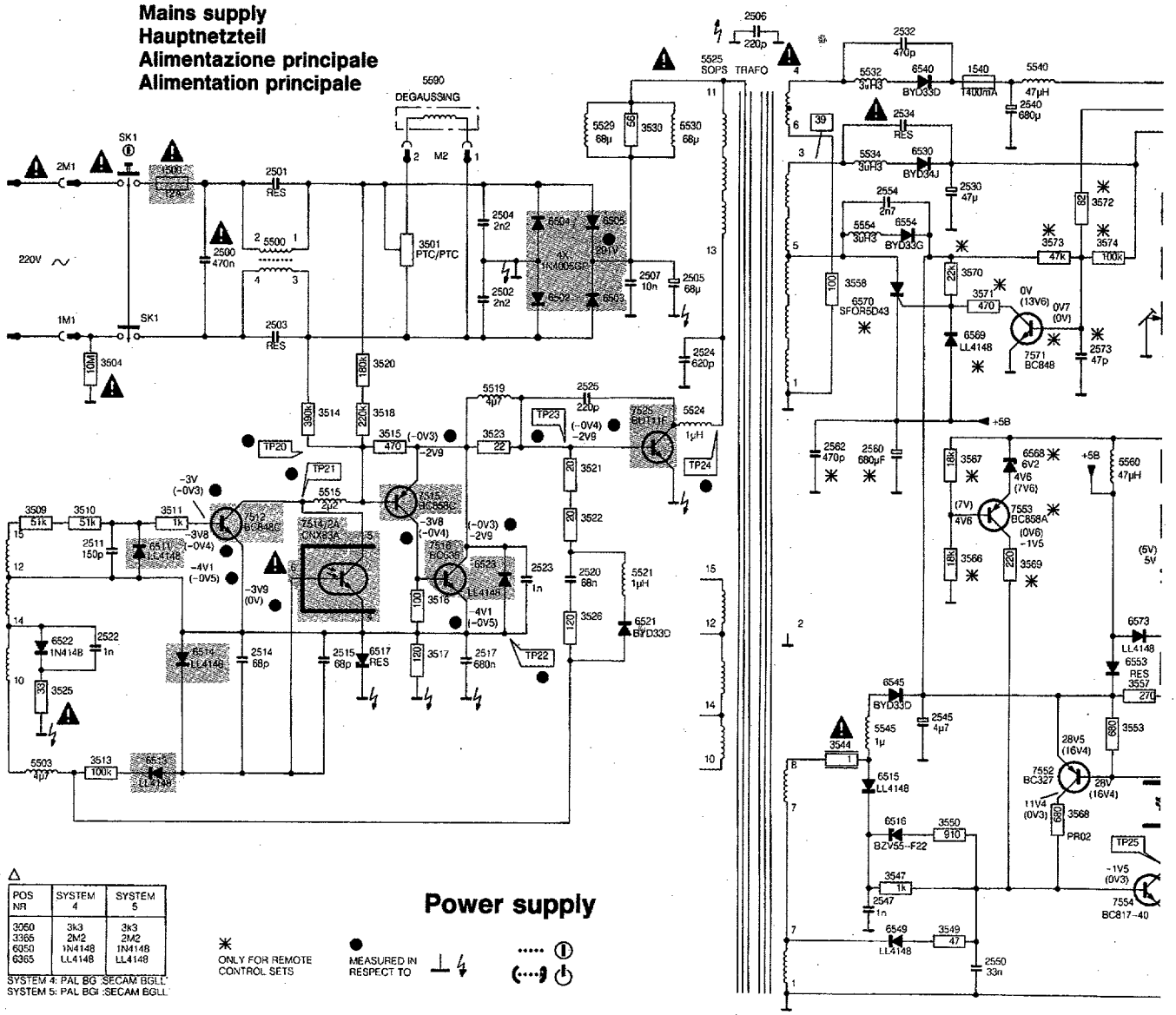
B

DIAGRAM B

Sync



Mains supply
Hauptnetzteil
Alimentazione principale
Alimentation principale



Power supply

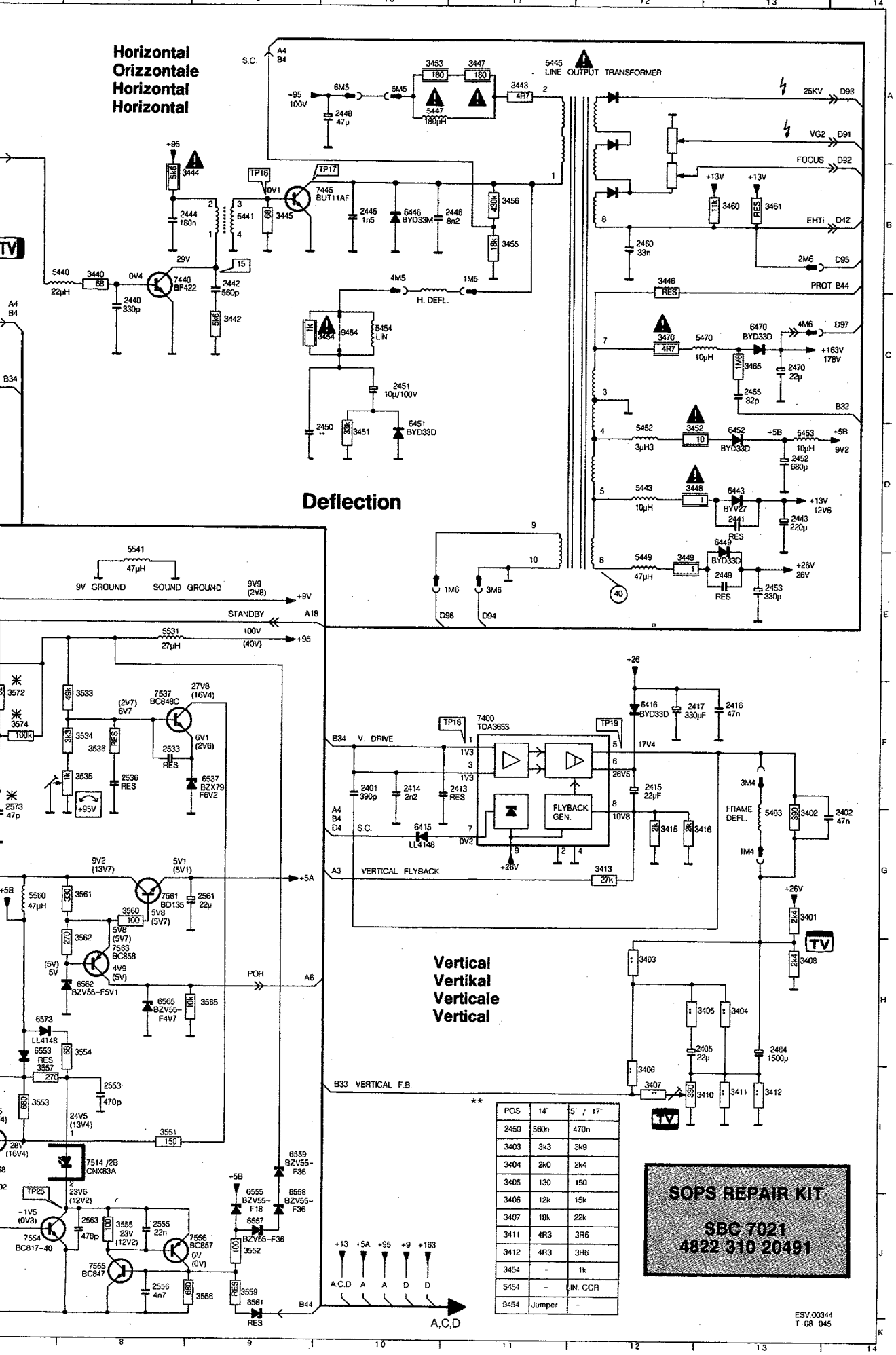
POS NR	SYSTEM 4	SYSTEM 5
3050	3k3	3k3
3365	2M2	2M2
6050	1N4148	1N4148
6365	LL4148	LL4148

SYSTEM 4: PAL BG :SECAM BGLL'
SYSTEM 5: PAL BGI :SECAM BGLL

✳ ONLY FOR REMOTE CONTROL SETS

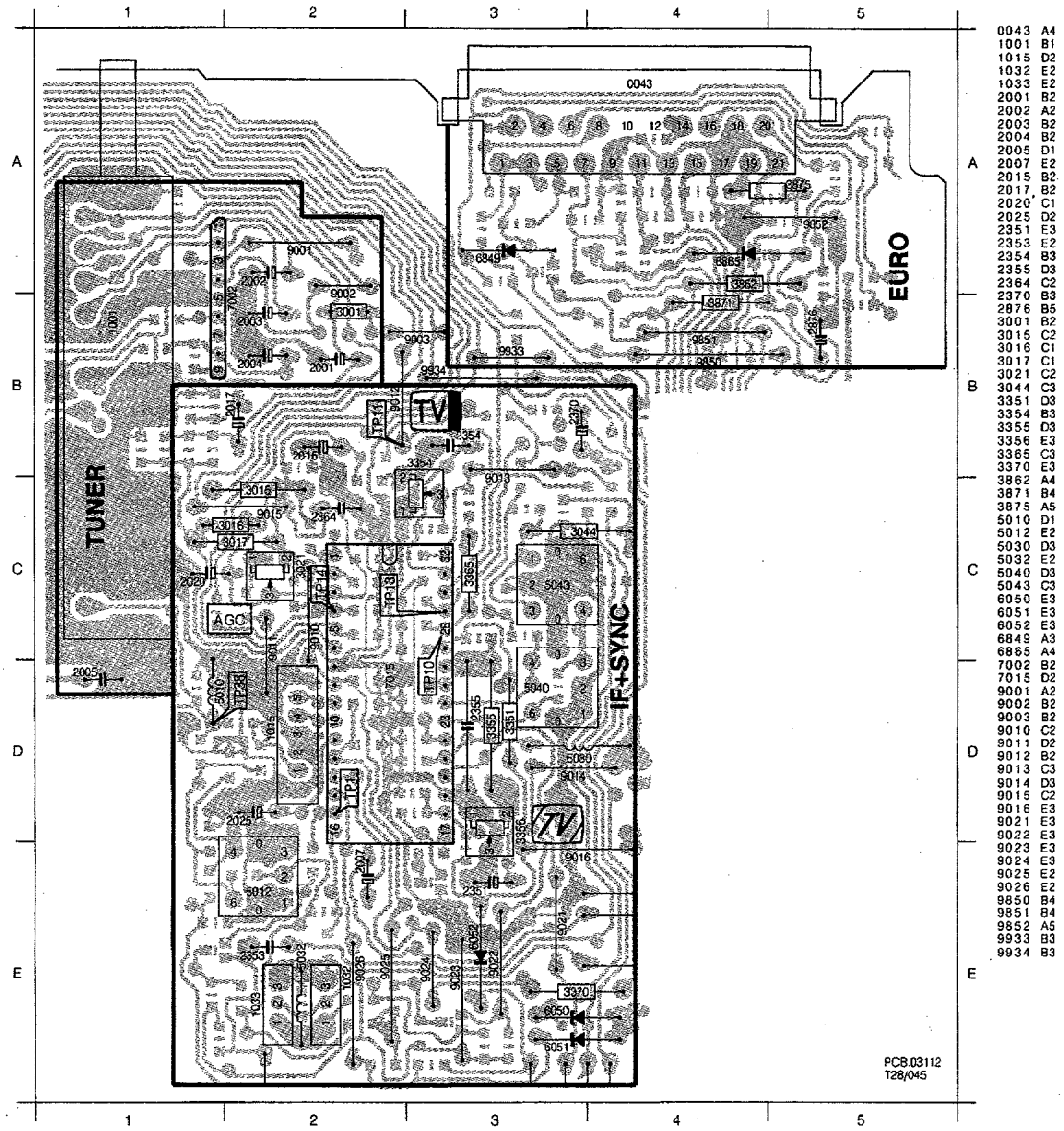
● MEASURED IN RESPECT TO

Synchronisation Synchronization



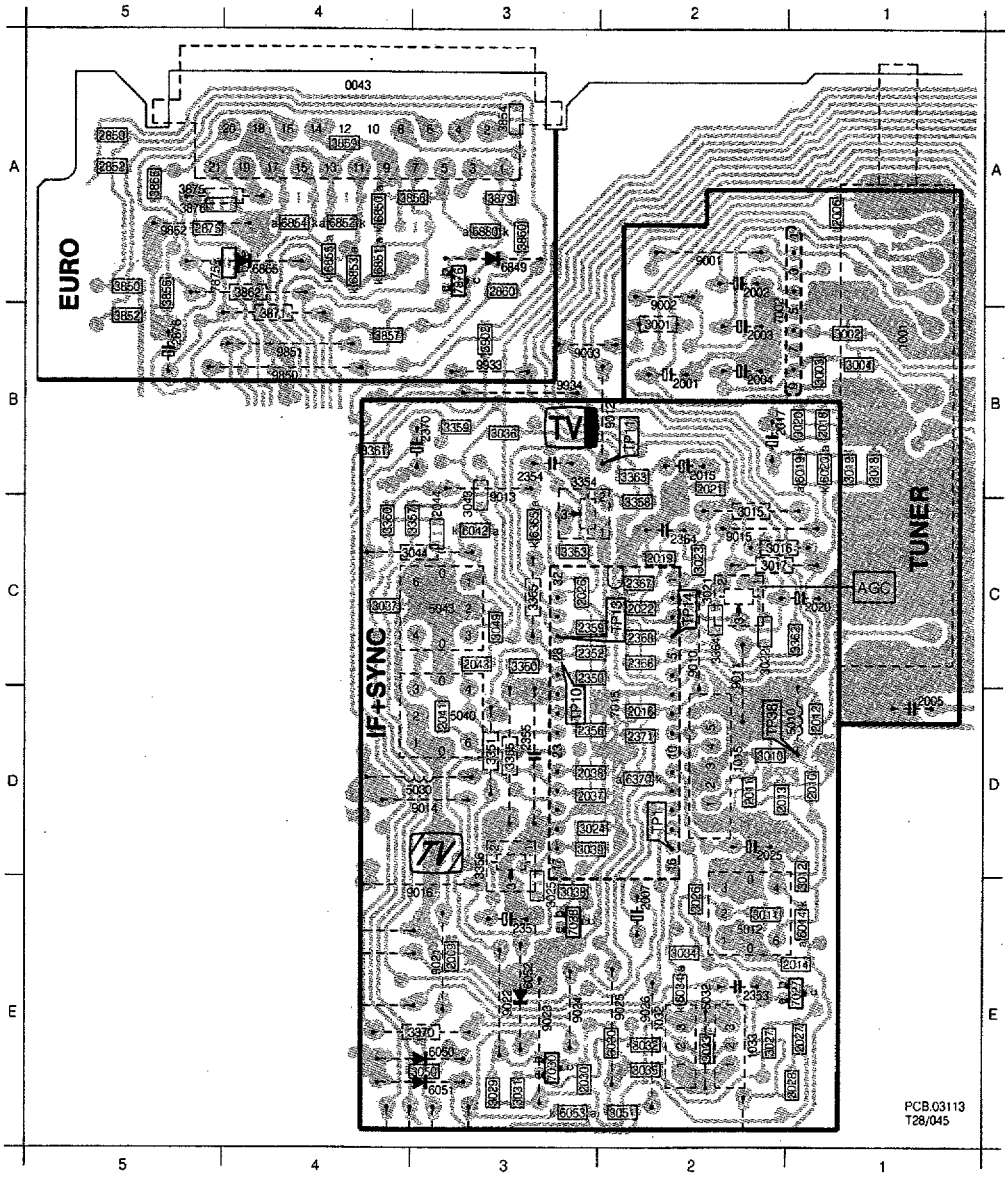
POS	14"	5" / 17"
2450	560n	470n
3403	3k3	3k9
3404	2k0	2k4
3405	130	150
3406	12k	15k
3407	18k	22k
3411	4R3	3R6
3412	4R3	3R6
3454	-	1k
5454	-	LIN. COR
9454	Jumper	-

1500-F1 3549-J6
1540-E6 3550-J6
2350-A4 3551-I 8
2351-A3 3552-J9
2352-B2 3553-I 7
2353-B1 3554-I 8
2354-C6 3555-J8
2355-A5 3556-J9
2356-C2 3557-I 7
2359-B6 3558-F6
2364-D5 3559-J9
2366-D6 3560-G8
2368-D6 3561-G8
2370-D3 3562-H8
2371-D4 3565-H9
2401-G10 3566-H6
2402-G14 3567-G6
2404-I 13 3568-J7
2405-I 12 3569-H7
2413-G11 3570-F6
2414-G10 3571-F6
2415-G12 3572-F7
2416-F13 3573-F7
2417-F12 3574-F7
2440-C8 5403-G13
2441-D13 5440-B8
2442-C9 5441-B9
2443-D13 5443-D12
2444-B8 5445-A11
2445-B10 5447-A10
2446-B10 5449-E12
2448-A10 5452-D12
2449-E13 5453-D13
2450-D9 5454-C10
2451-C10 5470-C12
2452-D13 5500-F2
2453-E13 5503-I 1
2460-B12 5515-G2
2465-C13 5519-G3
2470-C13 5521-H4
2500-F2 5524-G5
2501-F2 5525-E5
2502-F3 5529-E4
2503-F2 5530-E5
2504-F3 5531-E8
2505-F5 5532-E6
2506-E5 5534-E6
2507-F4 5540-E7
2511-H1 5541-E8
2514-I 2 5545-I 6
2515-I 2 5554-F6
2517-I 3 6050-C1
2520-H4 6051-B1
2522-H1 6052-B1
2523-H4 6053-B1
2524-G5 6365-A1
2525-G4 6370-D4
2530-F6 6415-G10
2532-E6 6416-F12
2533-F8 6443-D13
2534-E6 6446-B10
2536-F8 6449-E13
2540-E7 6451-C10
2545-I 6 6452-D13
2547-J6 6470-C13
2550-J6 6502-F4
2553-I 8 6503-F4
2554-F6 6504-F4
2555-J8 6505-F4
2556-J8 6511-H1
2560-G6 6513-I 1
2561-G9 6514-I 2
2562-G5 6515-I 6
2563-J8 6516-J6
2573-G7 6517-I 3
3050-C1 6521-H4
3051-B1 6522-I 1
3350-A4 6523-H4
3351-A3 6530-E6
3352-B1 6537-F9
3353-B6 6540-E6
3354-B7 6545-I 6
3355-A5 6549-J6
3356-A6 6553-I 7
3358-B7 6554-F6
3359-A6 6555-J9
3362-C6 6557-J9
3364-D5 6558-J9
3365-A1 6559-I 9
3370-D3 6561-K8
3401-G13 6562-H8
3402-G13 6565-H8
3403-H12 6568-G7
3404-H13 6569-F6
3405-H12 6570-F6
3406-H12 6573-H8
3407-I 12 7015-D2
3408-H13 7400-G11
3410-I 12 7440-B8
3411-I 13 7445-B9
3412-I 13 7512-H2
3413-G12 7514-H2
3415-G12 7515-G3
3416-G12 7516-H3
3440-B8 7525-G4
3442-C9 7537-F8
3443-A11 7552-I 7
3444-B8 7553-H6
3445-B9 7554-J7
3446-C12 7555-J8
3447-A11 7556-J8
3448-D12 7561-G8
3449-E12 7563-H8
3451-C10 7571-F7
3452-D12 9454-C10
3453-A10 SK1 -F1
3454-C9
3455-B11
3456-B11
3460-B13
3461-B13
3465-C13
3470-C12
3501-F3
3504-G1
3509-H1
3510-H1
3511-H1
3513-I 1
3514-G2
3515-G3
3516-H3
3517-I 3
3518-G3
3520-G3
3521-G4
3522-H4
3523-G3
3525-I 1
3526-H4
3530-E4
3533-F8
3534-F8
3535-F8
3536-F8
3544-I 5
3547-J6

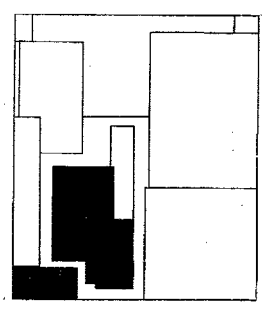


0043 A4
1001 B1
1015 D2
1032 E2
1033 E2
2001 B2
2002 A2
2003 B2
2004 B2
2005 D1
2007 E2
2015 B2
2017 B2
2020 C1
2025 D2
2351 E3
2353 E2
2354 B3
2355 D3
2364 C2
2370 B3
2876 B5
3001 B2
3015 C2
3016 C1
3017 C1
3021 C2
3044 C3
3351 D3
3354 B3
3355 D3
3356 E3
3365 C3
3370 E3
3862 A4
3871 B4
3875 A5
5010 D1
5012 E2
5030 D3
5032 E2
5040 D3
5043 C3
6050 E3
6051 E3
6052 E3
6849 A3
6865 A4
7002 B2
7015 D2
9001 A2
9002 B2
9003 B2
9010 C2
9011 D2
9012 B2
9013 C3
9014 D3
9015 C2
9016 E3
9021 E3
9022 E3
9023 E3
9024 E3
9025 E2
9026 E2
9850 B4
9851 B4
9852 A5
9933 B3
9934 B3

Quellenwahl Selection de source

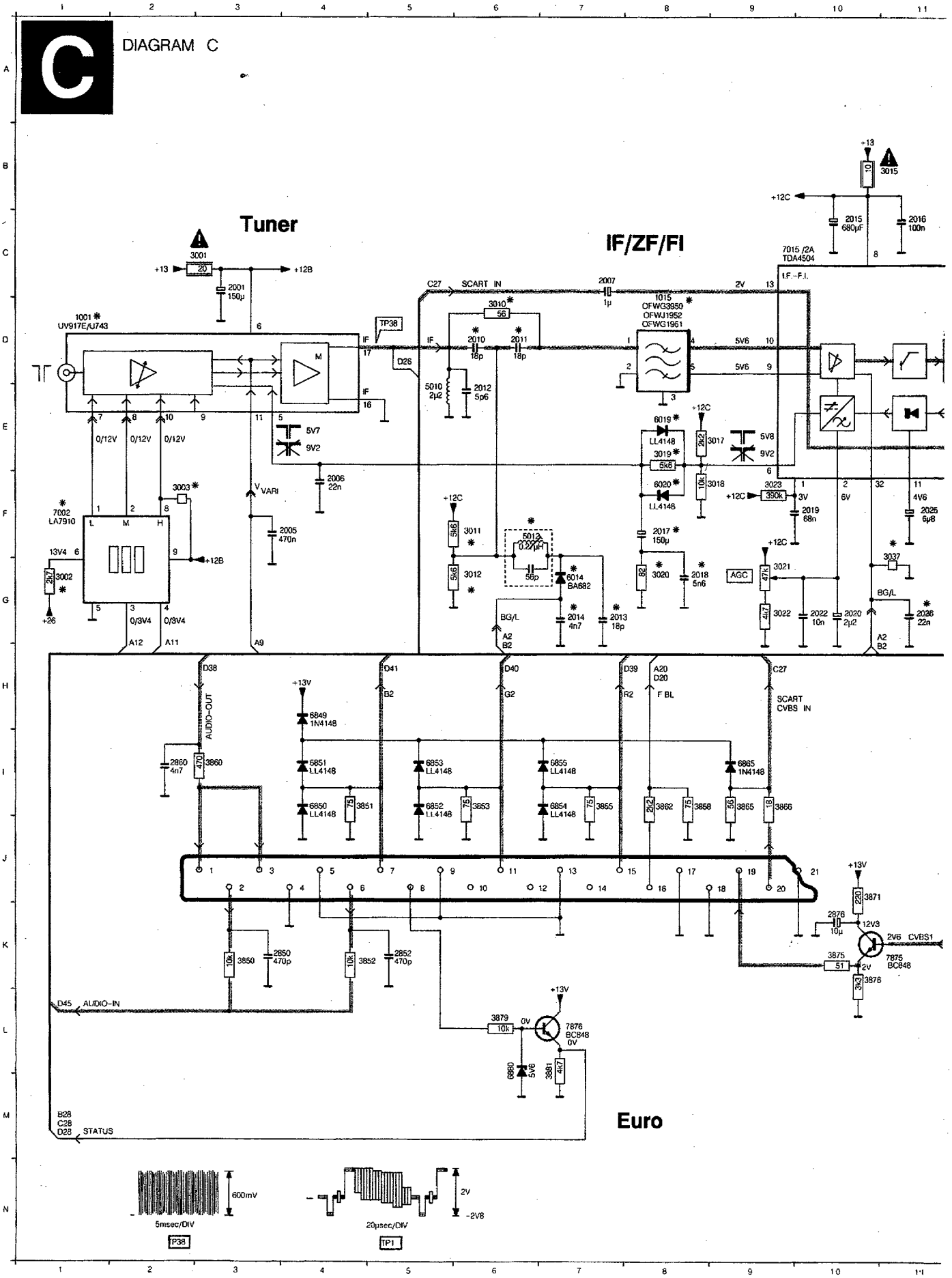


0043	A4	3035	E2	9014	D3
1001	B1	3036	B3	9015	C2
1015	D2	3037	C4	9016	E3
1032	E2	3038	E3	9021	E3
1033	E2	3039	D2	9022	E3
2001	B2	3043	C3	9023	E3
2002	A2	3044	C3	9024	E3
2003	B2	3049	C3	9025	E2
2004	B2	3050	E3	9026	E2
2005	D1	3051	E2	9850	B4
2006	A1	3350	C3	9851	B4
2007	E2	3351	D3	9852	A5
2009	E3	3353	C3	9933	B3
2010	D1	3354	B3	9934	B3
2011	D2	3355	D3		
2012	D1	3356	E3		
2013	D2	3357	C4		
2014	E1	3358	C2		
2015	B2	3359	B3		
2016	D2	3360	C4		
2017	B2	3361	B4		
2018	B1	3362	C1		
2019	C2	3363	B2		
2020	C1	3364	C2		
2021	B2	3365	C3		
2022	C2	3370	E3		
2025	D2	3850	A5		
2026	C3	3852	B5		
2027	E1	3854	A3		
2030	E3	3856	A3		
2037	D2	3857	B4		
2038	D2	3858	B5		
2041	D3	3859	A4		
2043	C3	3860	A3		
2044	C3	3862	A4		
2350	C2	3866	A5		
2351	E3	3871	B4		
2352	C2	3875	A5		
2353	E2	3876	A5		
2354	B3	3879	A3		
2355	D3	3902	B3		
2356	D2	5010	D1		
2359	C2	5012	E2		
2364	C2	5030	D3		
2366	C2	5032	E2		
2367	C2	5040	D3		
2368	C2	5043	C3		
2370	B3	6014	E1		
2371	D2	6019	B1		
2850	A5	6020	B1		
2852	A5	6034	E2		
2860	A3	6042	C3		
2875	A5	6050	E3		
2876	B5	6051	E3		
3001	B2	6052	E3		
3002	B1	6053	E3		
3003	B1	6365	C2		
3004	B1	6370	D2		
3010	D2	6849	A3		
3011	E2	6850	A4		
3012	E1	6851	A4		
3015	C2	6852	A4		
3016	C1	6853	A4		
3017	C1	6854	A4		
3018	B1	6855	A4		
3019	B1	6865	A4		
3020	B1	6880	A3		
3021	C2	7002	B2		
3022	C2	7015	D2		
3023	C2	7027	E1		
3024	D2	7030	E3		
3025	E3	7038	E3		
3026	E2	7875	A5		
3027	E2	7876	A3		
3028	E1	9001	A2		
3029	E3	9002	B2		
3030	E2	9003	B2		
3031	E3	9010	C2		
3032	E2	9011	D2		
3033	E2	9012	B2		
3034	E2	9013	C3		

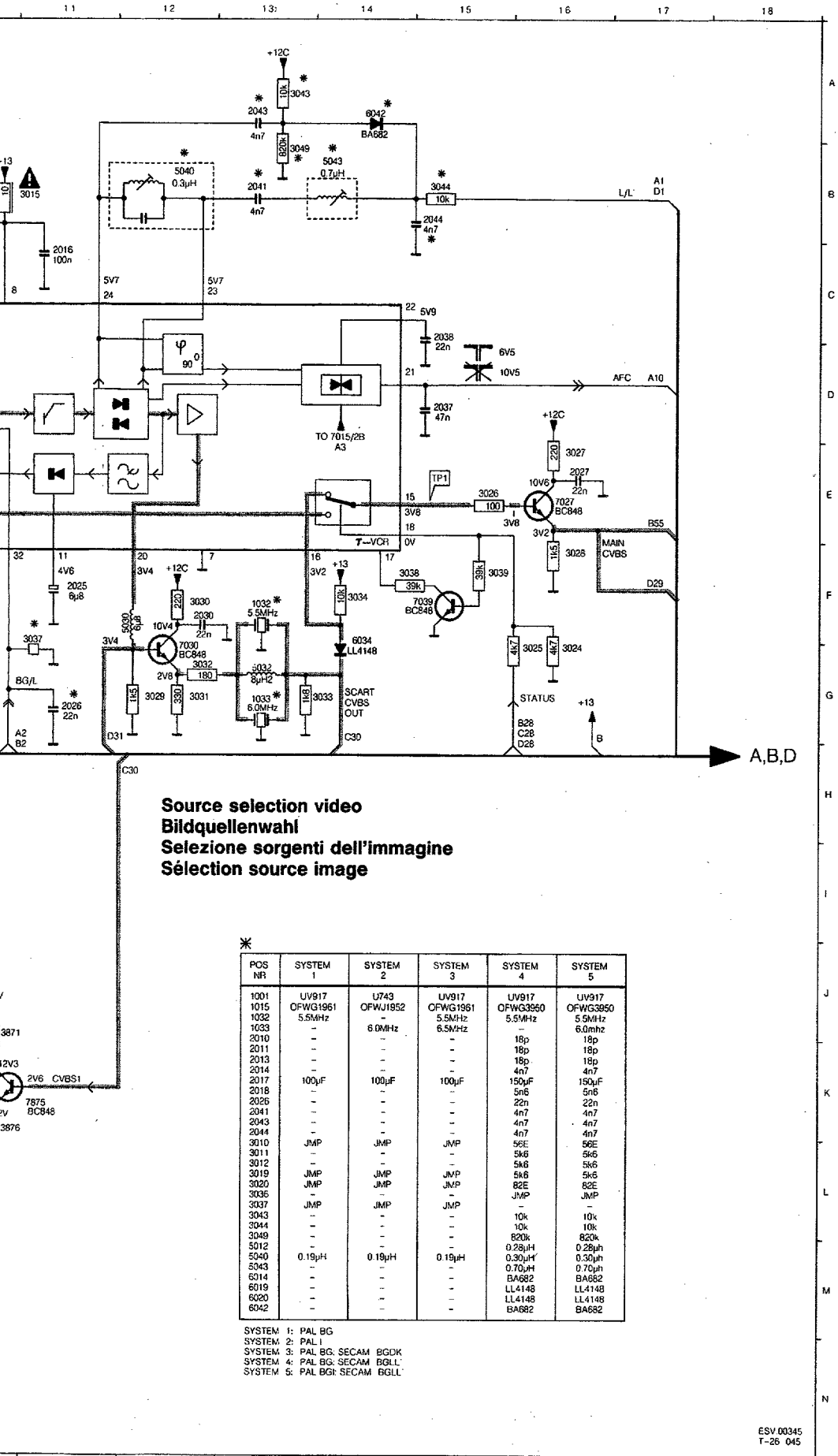


C

DIAGRAM C


Tuner
IF/ZF/FI
Euro
SCART IN
SCART CVBS IN
AUDIO-OUT
AUDIO-IN
STATUS
TP38
TP1
600mV
5msec/Div
20µsec/Div
2V
-2V8

Quellenwahl Selection de source



Source selection video
Bildquellenwahl
Selezione sorgenti dell'immagine
Sélection source image

✳

POS NR	SYSTEM 1	SYSTEM 2	SYSTEM 3	SYSTEM 4	SYSTEM 5
1001	UV917	U743	UV917	UV917	UV917
1015	OFWG1961	OFWJ1952	OFWG1961	OFWG3950	OFWG3950
1032	5.5MHz	–	5.5MHz	5.5MHz	5.5MHz
1033	–	6.0MHz	6.5MHz	–	6.0mhz
2010	–	–	–	18p	18p
2011	–	–	–	18p	18p
2013	–	–	–	18p	18p
2014	–	–	–	4n7	4n7
2017	100µF	100µF	100µF	150µF	150µF
2018	–	–	–	5n6	5n6
2026	–	–	–	22n	22n
2041	–	–	–	4n7	4n7
2043	–	–	–	4n7	4n7
2044	–	–	–	4n7	4n7
3010	JMP	JMP	JMP	56E	56E
3011	–	–	–	5k6	5k6
3012	–	–	–	5k6	5k6
3019	JMP	JMP	JMP	5k6	5k6
3020	JMP	JMP	JMP	82E	82E
3036	–	–	–	JMP	JMP
3037	JMP	JMP	JMP	–	–
3043	–	–	–	10k	10k
3044	–	–	–	10k	10k
3049	–	–	–	820k	820k
5012	–	–	–	0.28µH	0.28µh
5040	0.19µH	0.19µH	0.19µH	0.30µH	0.30µh
5043	–	–	–	0.70µH	0.70µh
6014	–	–	–	BA682	BA682
6019	–	–	–	LL4148	LL4148
6020	–	–	–	LL4148	LL4148
6042	–	–	–	BA682	BA682

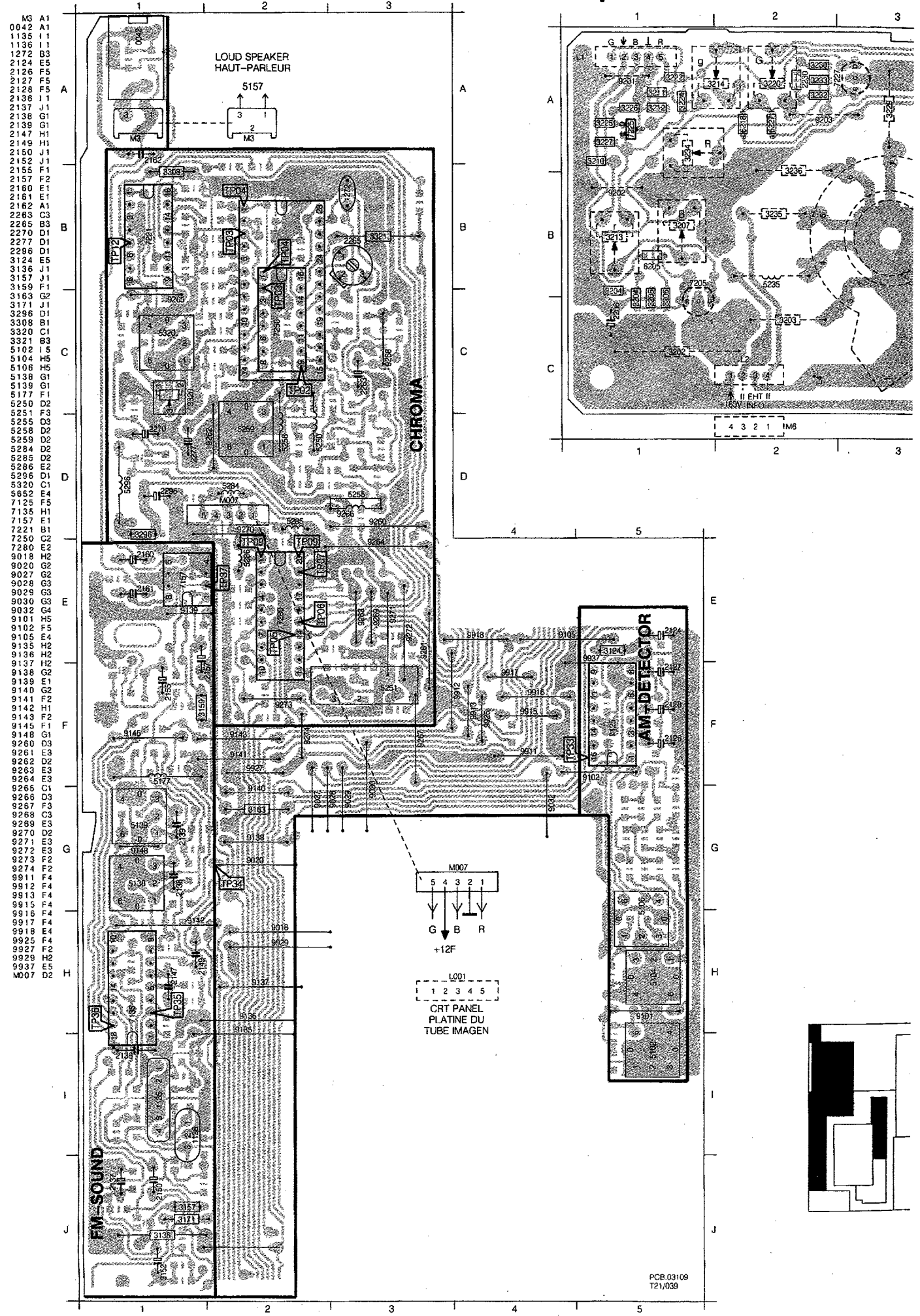
SYSTEM 1: PAL BG
SYSTEM 2: PAL I
SYSTEM 3: PAL BG, SECAM BGDK
SYSTEM 4: PAL BG, SECAM BGLL'
SYSTEM 5: PAL BGI SECAM BGLL'

ESV 00345
T-26 045

1001 D1
1015 D8
1032 F13
1033 G13
2001 C3
2005 F4
2006 F4
2007 C7
2010 D6
2011 D6
2012 E6
2013 G7
2014 G7
2015 C10
2016 C11
2017 F8
2018 G8
2019 F10
2020 G10
2022 G10
2025 F11
2026 G11
2027 E16
2030 F12
2037 D15
2038 C15
2041 B13
2043 A13
2044 B15
2850 K3
2852 K5
2860 I2
2876 K10
3001 C3
3002 G1
3003 F2
3010 D6
3011 F6
3012 G6
3015 B11
3017 E9
3018 F9
3019 E8
3020 G8
3021 G9
3022 G9
3023 F9
3024 G16
3025 G16
3026 E15
3027 E16
3028 F16
3029 G12
3030 F12
3031 G12
3032 G12
3033 G13
3034 F14
3037 G11
3038 F14
3039 F15
3043 A13
3044 B15
3049 B13
3850 K3
3851 I4
3852 K5
3853 I6
3855 I7
3858 I8
3860 I3
3862 I8
3865 I9
3866 I9
3871 J10
3875 K10
3876 K10
3879 L6
3881 L7
5010 E5
5012 F6
5030 F12
5032 G13
5040 B12
5043 B14
6014 G7
6019 E8
6020 F8
6034 F14
6042 A14
6849 H4
6850 I4
6851 I4
6852 I5
6853 I5
6854 I7
6855 I7
6865 I9
6880 L6
7002 F1
7015 C9
7027 E16
7030 G12
7039 F15
7875 K11
7876 L7

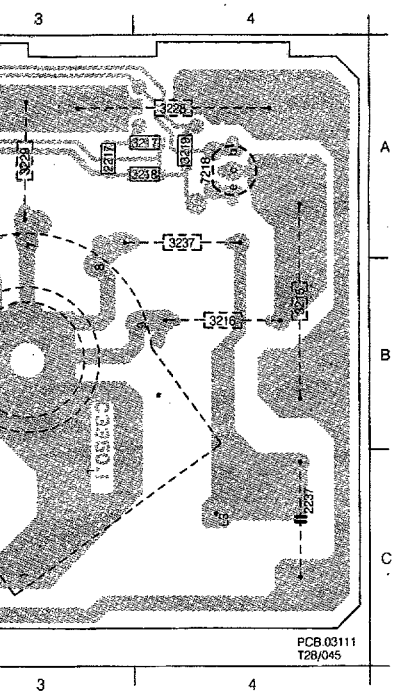
Video Sound Ton Son

CRT panel

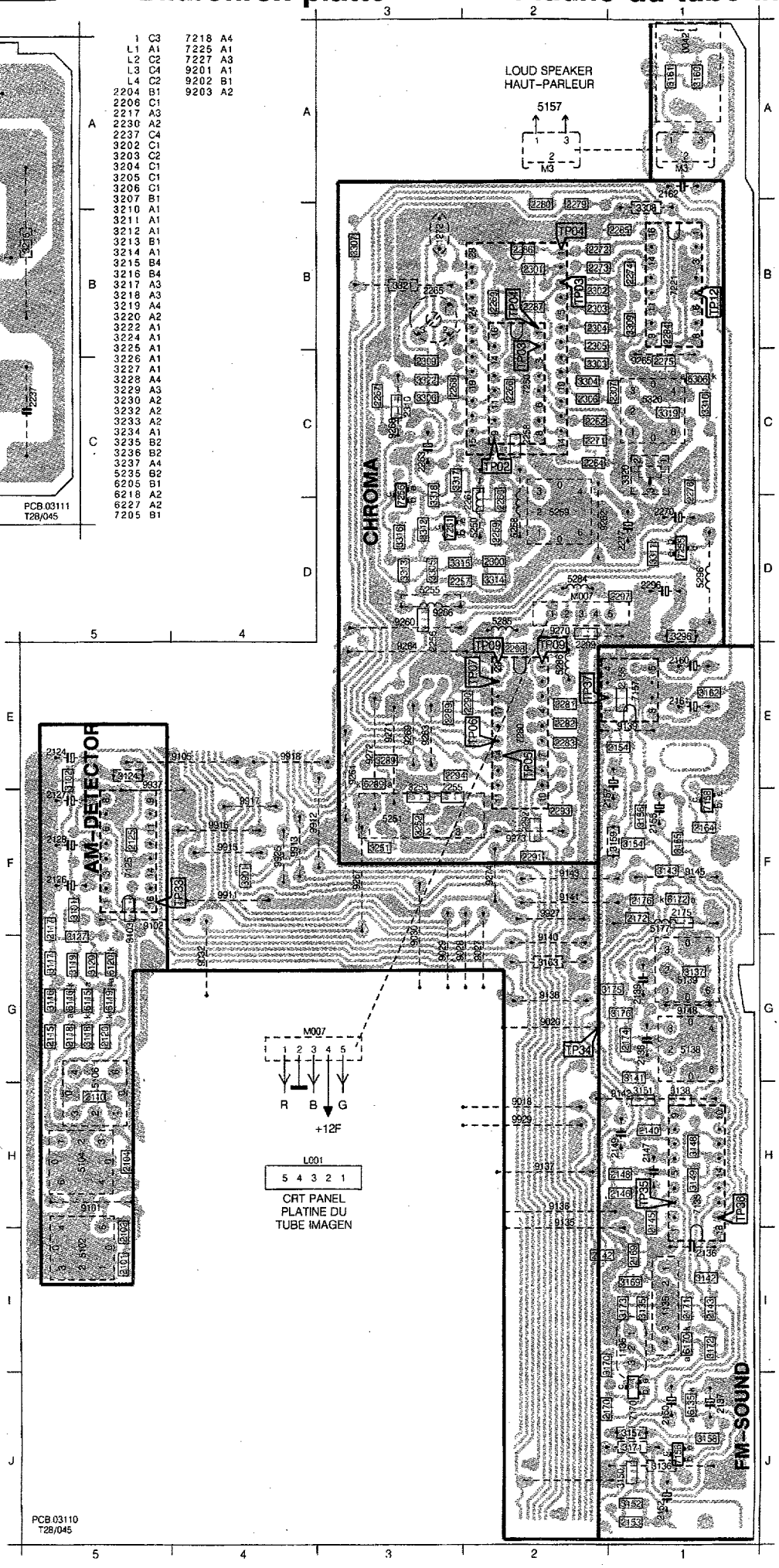


Bildröhren platte

Platine du tube image



1	C3	7218	A4
L1	A1	7225	A1
L2	C2	7227	A3
L3	C4	9201	A1
L4	C2	9202	B1
2204	B1	9203	A2
2206	C1		
2217	A3		
2230	A2		
2237	C4		
3202	C1		
3203	C2		
3204	C1		
3205	C1		
3206	C1		
3207	B1		
3210	A1		
3211	A1		
3212	A1		
3213	B1		
3214	A1		
3215	B4		
3216	B4		
3217	A3		
3218	A3		
3219	A4		
3220	A2		
3222	A1		
3224	A1		
3225	A1		
3226	A1		
3227	A1		
3228	A4		
3229	A3		
3230	A2		
3232	A2		
3233	A2		
3234	A1		
3235	B2		
3236	B2		
3237	A4		
5235	B2		
6205	B1		
6218	A2		
6227	A2		
7205	B1		

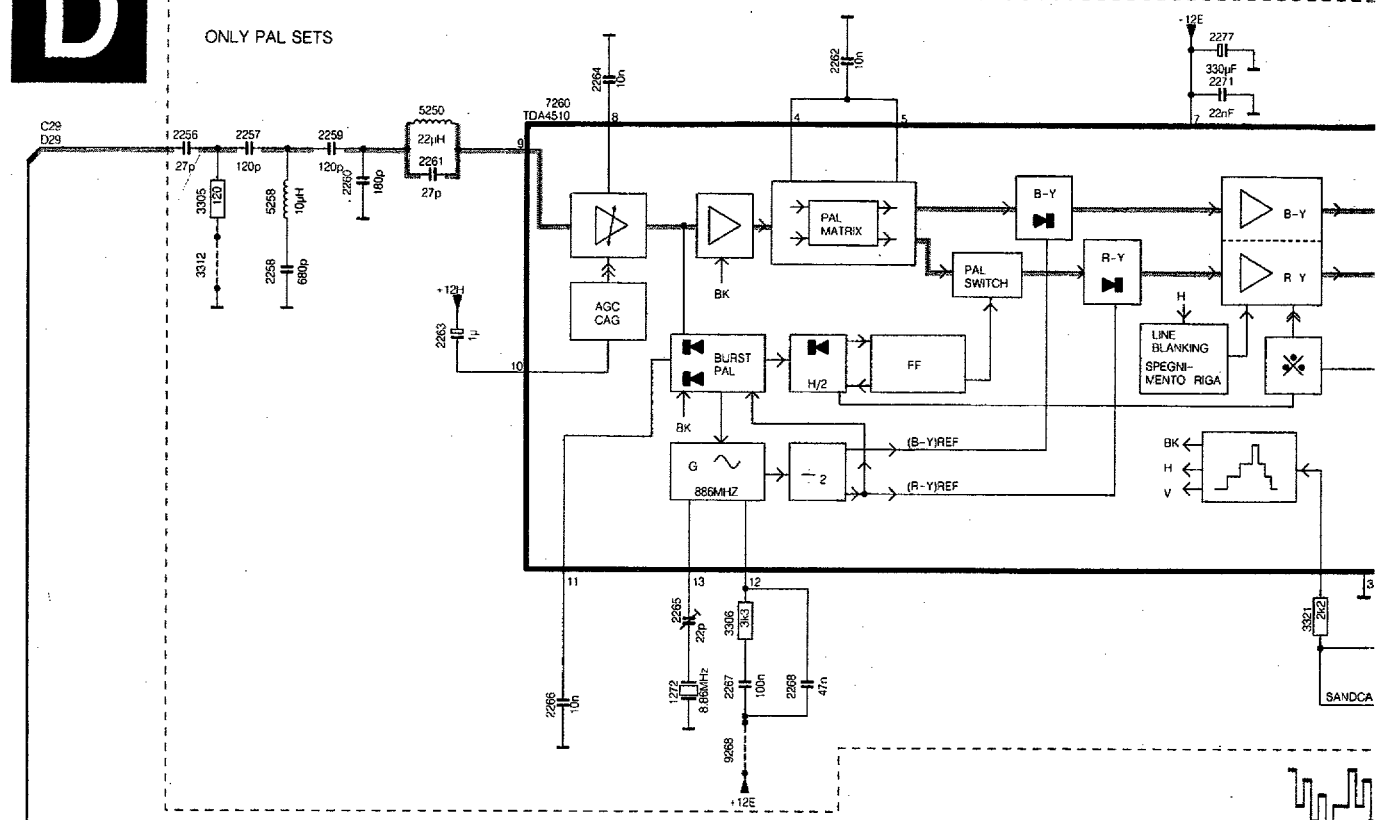


M3	A1	3304	C2
0042	A1	3305	D3
1135	I1	3306	C3
1136	I1	3307	B3
1272	B3	3308	B1
2101	I5	3309	B1
2102	I5	3310	C1
2104	H5	3311	D1
2110	H5	3312	D3
2115	G5	3313	D3
2117	G5	3314	D2
2118	G5	3315	D2
2120	G5	3316	D3
2124	E5	3317	C3
2125	F5	3318	D3
2126	F5	3319	C1
2127	F5	3320	C1
2128	F5	3321	B3
2136	I1	3322	C3
2137	J1	3901	F4
2138	G1	5102	I5
2139	G1	5104	H5
2140	H1	5106	H5
2142	I1	5138	G1
2143	I1	5139	G1
2145	I1	5177	F1
2146	H1	5250	D2
2147	H1	5251	F3
2148	H1	5255	D3
2149	H1	5258	D2
2150	J1	5259	D2
2152	J1	5284	D2
2153	J1	5285	D2
2154	E1	5286	E2
2155	F1	5296	D1
2157	F2	5320	C1
2158	E1	5652	E4
2160	E1	6115	G5
2161	E1	6116	G5
2162	A1	6119	G5
2164	F1	6120	G5
2169	I1	6135	J1
2170	J2	6170	I1
2171	I1	6172	F1
2172	F1	6289	E3
2174	G1	6306	C1
2175	F1	7125	F5
2176	F1	7135	H1
2255	F2	7156	J1
2256	E3	7157	E1
2257	D2	7158	F1
2258	C2	7170	J1
2259	D2	7221	B1
2260	D2	7250	C2
2261	D2	7251	D3
2262	C2	7255	D1
2263	C3	7256	D3
2264	C2	7280	E2
2265	B3	9018	H2
2266	C2	9020	G2
2267	C3	9027	G2
2268	C3	9028	G3
2269	B2	9029	G3
2270	D1	9030	G3
2271	C2	9032	G4
2272	B1	9101	H5
2273	B1	9102	F5
2274	B1	9105	E4
2275	C1	9135	H2
2276	D1	9136	H2
2277	D1	9137	H2
2279	B2	9138	G2
2280	B2	9139	E1
2281	E2	9140	G2
2282	E2	9141	F2
2283	E2	9142	H1
2284	B1	9143	F2
2285	B1	9145	F1
2286	B2	9148	G1
2287	B2	9260	D3
2289	E3	9261	E3
2290	E2	9262	D2
2291	F2	9263	E3
2292	F2	9264	E3
2293	F2	9265	C1
2294	E2	9266	D3
2296	D1	9267	F3
2297	D1	9268	C3
2298	E2	9269	E3
2299	E2	9270	D2
2300	D2	9271	E3
2301	B2	9272	E3
2302	B1	9273	F2
2303	B1	9274	F2
2304	B1	9911	F4
2305	B1	9912	F4
2306	C2	9913	F4
2307	C1	9915	F4
2309	C3	9916	F4
2310	C3	9917	F4
3101	F5	9918	E4
3102	F5	9925	F4
3103	G5	9927	F2
3116	G5	9929	H2
3117	G5	9937	E5
3118	G5	M007	D2
3119	G5		
3120	G5		
3124	E5		
3127	G5		
3135	I1		
3136	J1		
3137	G1		
3138	H1		
3141	G1		
3142	I1		
3143	F1		
3148	H1		
3149	H1		
3150	J1		
3151	H1		
3152	J1		
3154	F1		
3155	F1		
3156	F1		
3157	J1		
3158	J1		
3159	F1		
3160	A1		
3161	A1		
3162	E1		
3163	G2		
3169	I1		
3170	J2		
3171	J1		
3172	I1		
3173	I1		
3175	G1		
3176	G1		
3251	F3		
3252	F3		
3253	F3		
3289	E3		
3296	D1		
3303	C1		

D

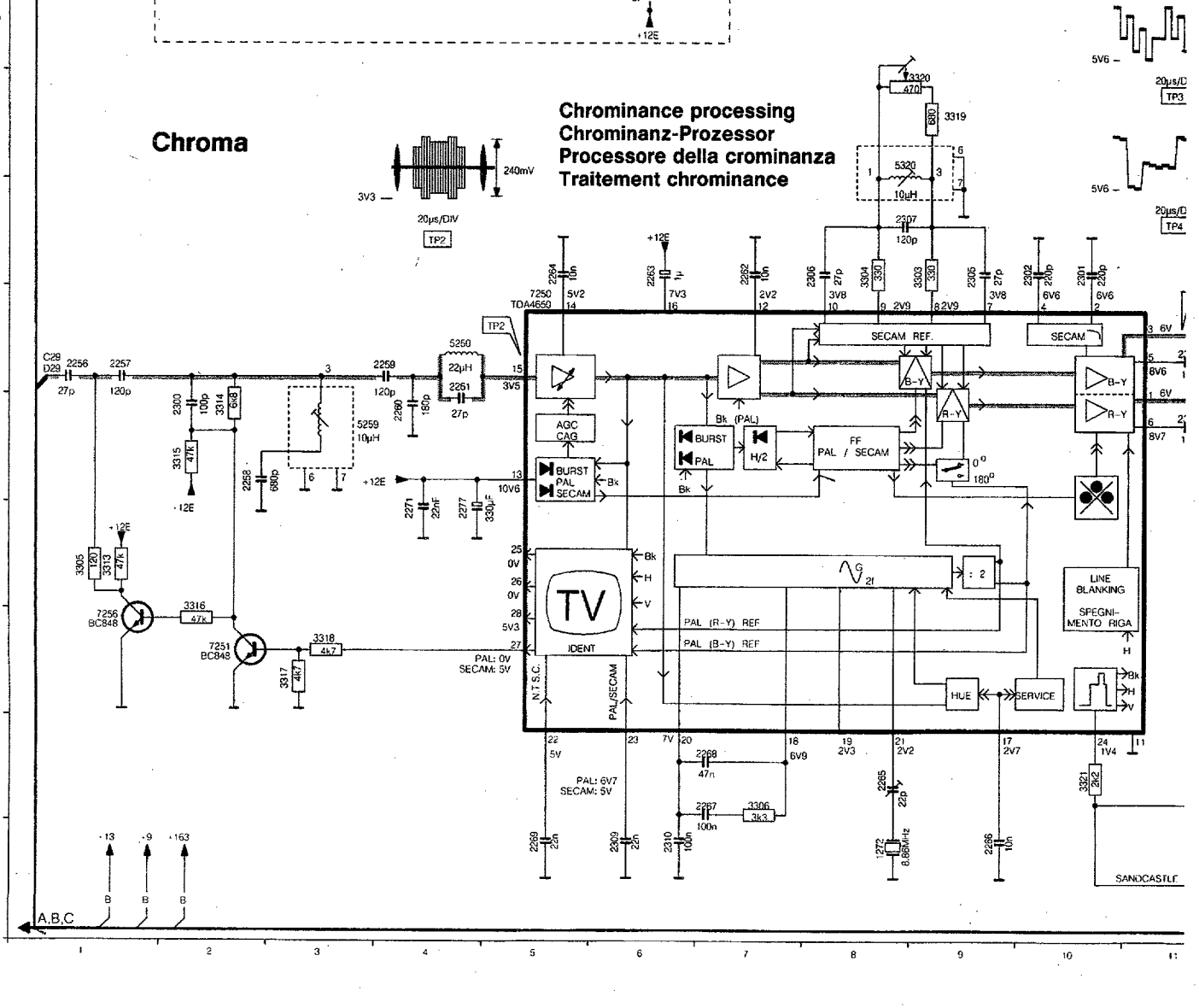
DIAGRAM D

ONLY PAL SETS

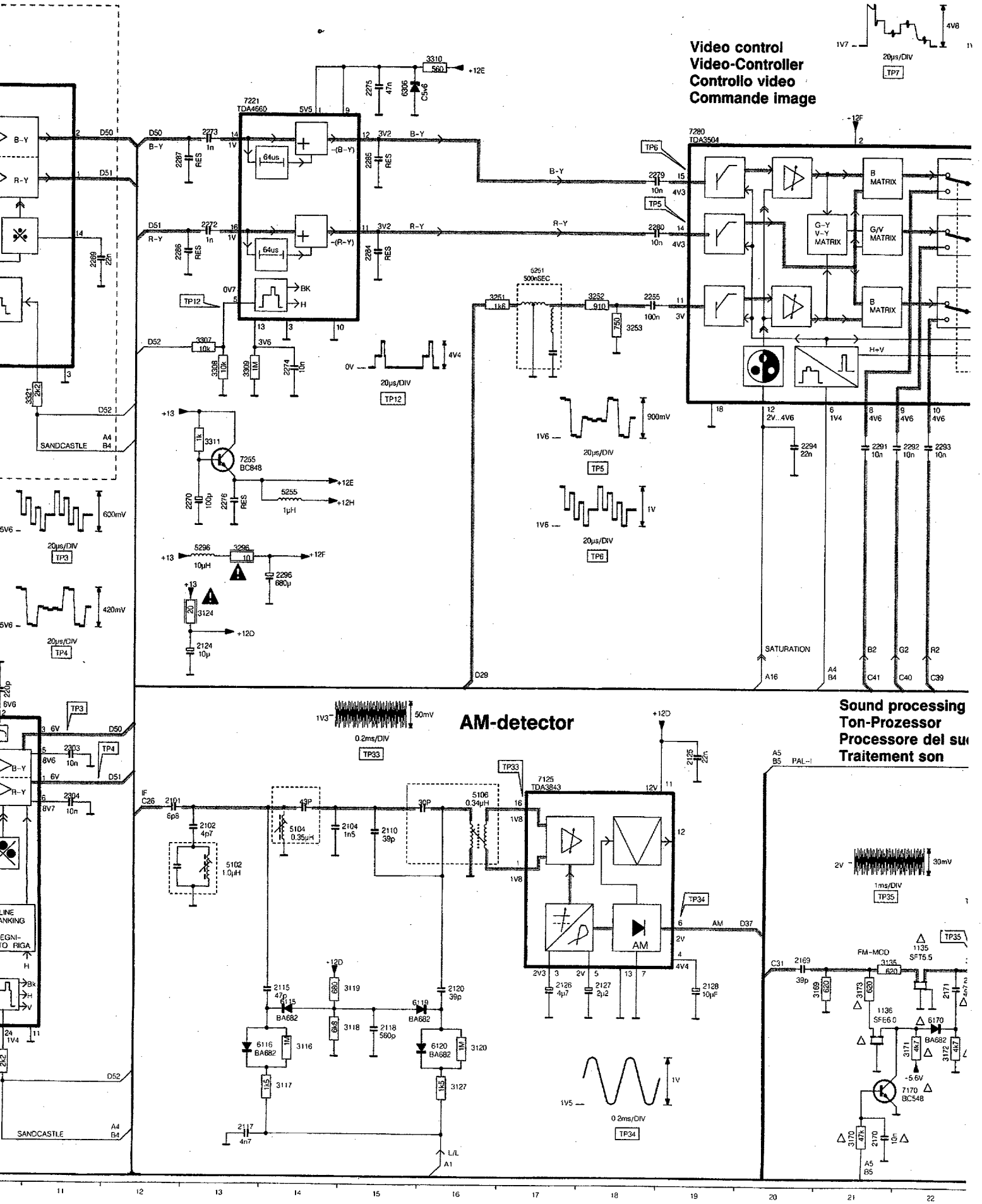


Chroma

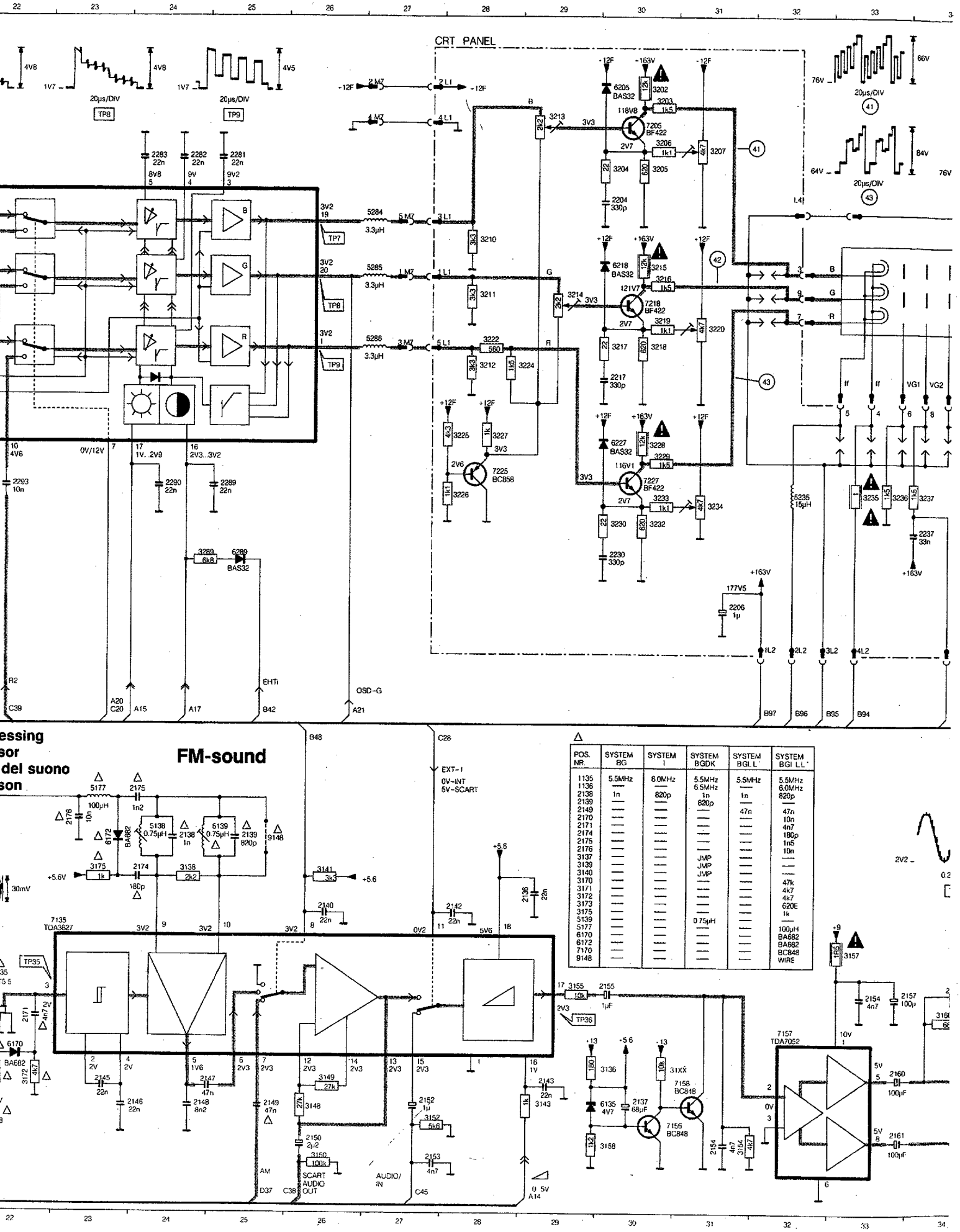
Chrominance processing
Chrominanz-Prozessor
Processore della crominanza
Traitement chrominance

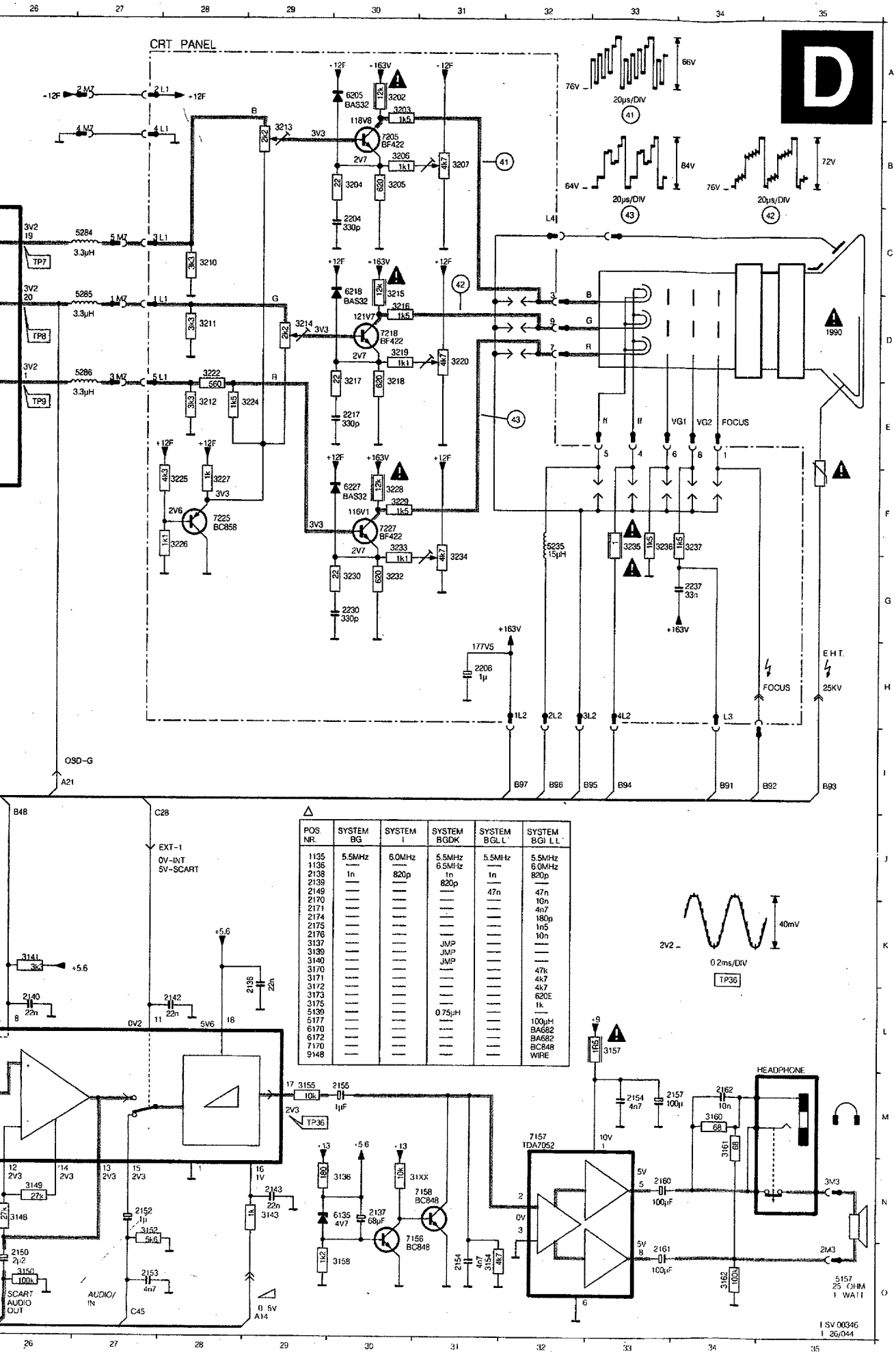


CRT panel Bildröhren platte



Platine du tube image





POS. NR.	SYSTEM BG	SYSTEM I	SYSTEM BGDK	SYSTEM BGLL'	SYSTEM BGI LL'
1135	5.5MHz	6.0MHz	5.5MHz	5.5MHz	5.5MHz
1136	—	—	6.5MHz	—	6.0MHz
2138	1n	820p	1n	1n	820p
2139	—	—	820p	—	—
2149	—	—	—	47n	47n
2170	—	—	—	—	10n
2171	—	—	—	—	4n7
2174	—	—	—	—	180p
2175	—	—	—	—	1n5
2176	—	—	—	—	10n
3137	—	—	JMP	—	—
3139	—	—	JMP	—	—
3140	—	—	JMP	—	—
3170	—	—	—	47k	—
3171	—	—	—	4k7	—
3172	—	—	—	4k7	—
3173	—	—	—	620E	—
3175	—	—	—	1k	—
5139	—	—	0.75µH	—	100µH
5177	—	—	—	—	BA682
6170	—	—	—	—	BA682
6172	—	—	—	—	BC848
7170	—	—	—	—	WIRE
9148	—	—	—	—	—

1135 M22	31XX N31	5139 K25	6218 D30
1136 M21	3202 A30	5177 J23	6227 F30
1272 F6	3203 A30	5235 F32	6289 G25
1272 O8	3204 B30	5250 B4	6306 B15
2101 K12	3205 B30	5250 J4	7125 K17
2102 K13	3206 B30	5251 D17	7135 L23
2104 K15	3207 B31	5255 G14	7156 N30
2110 K15	3210 C28	5258 B2	7157 M32
2115 M14	3211 D28	5259 K3	7158 N31
2117 O13	3212 E28	5284 C27	7170 N22
2118 N15	3213 B29	5285 D27	7205 B30
2120 M16	3214 D29	5286 D27	7218 D30
2124 I13	3215 D30	5296 H13	7221 B13
2125 J19	3216 D30	5320 H8	7225 F28
2126 M17	3217 E30	6115 M14	7227 F30
2127 M18	3218 E30	6116 N14	7250 J5
2128 M19	3219 D30	6119 M16	7251 M2
2136 L29	3220 D31	6120 N16	7255 F13
2137 N30	3222 D28	6135 N30	7256 M1
2138 K24	3224 E29	6170 M22	7260 B5
2139 K25	3225 F28	6172 K23	7280 B19
2140 L26	3226 F28	6205 A30	9148 K25
2142 L28	3227 F28	6210 A30	9268 G6
2143 N29	3228 F30	6218 D30	
2145 N23	3229 F30	6227 F30	
2146 N24	3230 G30	6289 G25	
2147 N25	3232 G30	6306 B15	
2148 N24	3233 F30	7125 K17	
2149 N25	3234 G31	7135 L23	
2150 O26	3235 F33	7156 N30	
2152 N27	3236 F33	7157 M32	
2153 O27	3237 F34	7158 N31	
2154 M33	3251 D16	7170 N22	
2154 O31	3252 D18	7205 B30	
2155 M30	3253 E18	7218 D30	
2157 M34	3289 G24	7221 B13	
2160 N33	3296 H13	7225 F28	
2161 O33	3303 I9	7227 F30	
2162 M34	3304 I8	7250 J5	
2169 M20	3305 B2	7251 M2	
2170 O21	3305 L1	7255 F13	
2171 M22	3306 F6	7256 M1	
2174 K24	3306 N7	7260 B5	
2175 J24	3307 E13	7280 B19	
2176 K23	3308 E13	9148 K25	
2204 C30	3309 E13	9268 G6	
2206 H31	3310 A16		
2217 E30	3311 F13		
2230 G30	3312 C2		
2237 G34	3313 L1		
2255 D18	3314 K2		
2256 B2	3315 K2		
2256 J1	3316 L2		
2257 B2	3317 M3		
2257 J1	3318 M3		
2258 C2	3319 H9		
2258 K2	3320 H9		
2259 B3	3321 F11		
2259 J4	3321 N10		
2260 B3	5102 L13		
2260 K4	5104 K14		
2261 B4	5106 K16		
2261 J4	5138 K24		
2262 A7			
2262 I7			
2263 D4			
2263 I6			
2264 A5			
2264 I5			
2265 F6			
2265 N8			
2266 F5			
2266 O9			
2267 F6			
2267 N7			
2268 F6			
2268 N7			
2269 D11			
2269 O5			
2270 G13			
2271 A10			
2271 L4			
2272 D13			
2273 B13			
2274 E14			
2275 B15			
2276 G13			
2277 A10			
2277 L4			
2279 C18			
2280 D18			
2281 B25			
2282 B24			
2283 B24			
2284 D15			
2285 C15			
2286 D12			
2287 C12			
2289 F25			
2290 F24			
2291 F21			
2292 F22			
2293 F22			
2294 F20			
2296 H14			
2300 K2			
2301 I10			
2302 I10			
2303 J11			
2304 K11			
2305 I9			
2306 I8			
2307 I8			
2309 O5			
2310 O6			
3116 N14			
3117 N14			
3118 N15			
3119 M15			
3120 N16			
3124 H13			
3127 N16			
3135 M21			
3136 N30			
3138 K24			
3141 K26			
3143 N29			
3148 N26			
3149 N26			
3150 O26			
3152 N27			
3154 O31			
3155 M29			
3157 L33			
3158 O30			
3160 M34			
3161 M34			
3162 O34			
3169 M21			
3170 O21			
3171 N22			
3172 N22			
3173 M21			
3175 K23			

Electrical instructions

1. Adjustments on the main panel (Fig. 7)

1.1 +100V power supply voltage
Connect a voltmeter (DC) between pin 6 of connector M5 and ground. Adjust potentiometer 3535 for a voltage of +100V.

1.2 Horizontal synchronization
Interconnect pins 8 and 28 of IC7015.
Apply an aerial signal and tune the set.
Adjust potentiometer 3356 until the picture is straight. Remove the interconnection.

1.3 Horizontal centring
Is adjusted with potentiometer 3354.

1.4 Vertical centring
Can be adjusted by eventually mounting one of the resistors 3401 or 3408.

1.5 Picture height
Is adjusted with potentiometer 3410.

1.6 Focussing
Is adjusted with the focussing potentiometer in the line output transformer (see Fig. 8).

1.7 IF filter for PAL/SECAM BGLL'- or PAL/SECAM BGLL'I sets
Connect a signal generator (e.g. PM 5326) via a condensator 5p6 to pin 17 of the tuner and adjust the frequency for 33.4 MHz. Connect an oscilloscope to pin 1 of filter 1015. Switch on the set and select system Europe via the system button on the set.
Adjust 5012 for a minimum amplitude.

1.8 AFC

a. Alignments for PAL/SECAM BGLL'- or PAL/SECAM BGLL'I sets
Connect a signal generator (e.g. PM 5326) as indicated in point 1.7 and adjust the frequency for 33.4 MHz. Tune the set in the VHF1 band at a tuning voltage of approx. 5V on pin 11 of the tuner. Select system France via the system button on the set. Connect a voltmeter to pin 21 of IC7015. Adjust 5040 for 6V (DC).
Next adjust the frequency of the signal generator for 38,9 MHz. Select system Europe on the set. Adjust 5043 for 6V (DC).

b. Alignment for PAL BG-, PAL/SECAM BG-, PAL/SECAM BGDK- or PAL I sets
Connect a signal generator (e.g. PM 5326) as indicated in point 1.7 and adjust the frequency for 38.9 MHz (PAL I: 39.5MHz). Connect a voltmeter to pin 21 of IC7015. Adjust 5040 for 6V (DC).

1.9 RF AGC
If the picture of a strong local transmitter is reproduced distorted, adjust potentiometer 3021 until the picture is undistorted.

1.10 Chroma band-pass filter for PAL/SECAM sets
Connect a signal generator (e.g. PM5326) to pin 20 of the euro connector and adjust it for a frequency of 4,286 MHz. Connect pin 8 of the euro connector and pin 27 of IC7250 to pin 13 of IC7250 (+12V). Connect an oscilloscope to pin 15 of IC7250.
Adjust 5259 for a maximum amplitude.
Remove the interconnections.

1.11 Chroma subcarrier oscillator
Apply a PAL colour-bar pattern. Interconnect pin 11 of IC7260 (TDA4510) or pin 17 of IC7250 (TDA4650) to ground. Adjust 2265 so that colour pattern on the screen is practically stationary.
Remove the interconnection.

1.12 SECAM demodulators for PAL/SECAM sets
Apply a SECAM black pattern. Connect an oscilloscope to pin 1 of IC7250. Adjust 5320 for 0 reading.
Connect the oscilloscope to pin 3 of IC7250. Adjust 3320 for 0 reading.

1.13 The FM sound section

a. General adjustments
Apply a PAL BG (PAL I for PAL I sets) generator signal whose sound carrier is (FM) modulated with a frequency of 1 kHz.
Set the generator to the mono mode.
Tune the set and select, if possible, system Europe.
Adjust 5138 for maximum sound output.

b. Additional adjustment for PAL/SECAM BGDK sets
After the general adjustment (see point a.) put the generator in SECAM DK position.
Adjust 5139 for maximum sound output.

1.14 The AM sound section for PAL/SECAM BGLL'- or PAL/SECAM BGLL'I sets
Connect pin 3 of IC7125 to a fixed voltage level of +2V by means of a adjustable power supply.
Connect a signal generator (e.g. PM 5326) via a condensator 5p6 to pin 17 of the tuner and adjust the frequency for 32,4 MHz. Modulate (AM) the signal with 1 kHz.
Tune the set in the UHF band and select system France.
First adjust 5106 for maximum sound output. Next adjust 5104 for maximum sound output.
Adjust the frequency of the signal generator for 30,9 MHz. and modulate (AM) the signal with 1 kHz.
Adjust 5102 for minimum sound output.
Remove the power supply connection.

2. Adjustments on the picture tube panel (Fig. 9)

2.1 Cut-off points of picture tube

Apply a black pattern generator signal. Adjust contrast at minimum.
Adjust brightness until the DC voltage across potentiometer 3213 is 0V.
Adjust 3207, 3220 and 3234 for a black level of 125V on the collectors of transistors 7205, 7218 and 7227.
Adjust Vg2 potentiometer until the gun that first emits light is just no longer visible. Adjust the two other guns with the respective controls (3207, 3220 or 3234) until just no light will be visible.

2.2 Grey scale

Apply a test pattern signal and adjust the set for normal operation. Allow the set to warm up for about 10 minutes. Adjust 3213 and 3214 until the desired grey scale has been obtained.

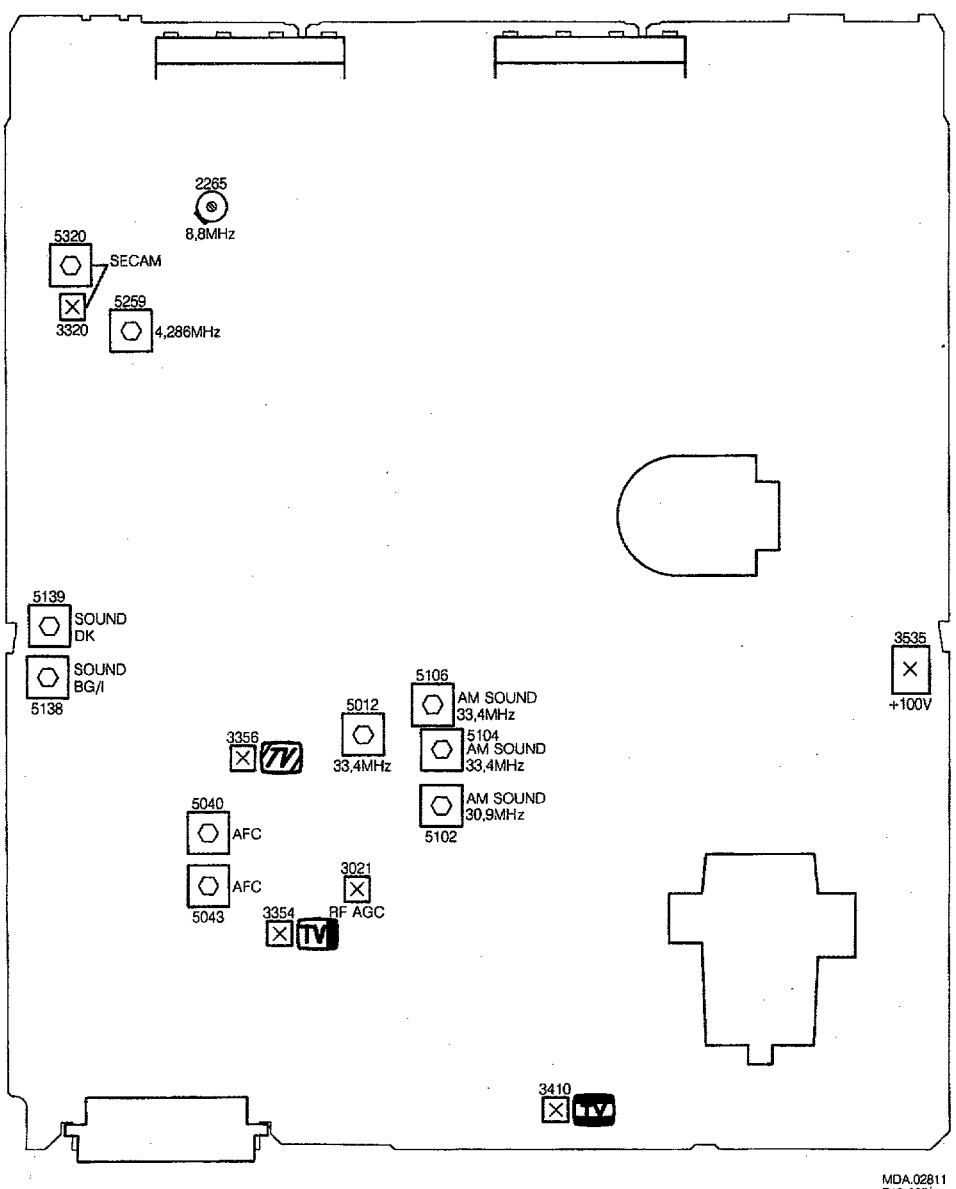


Fig. 7

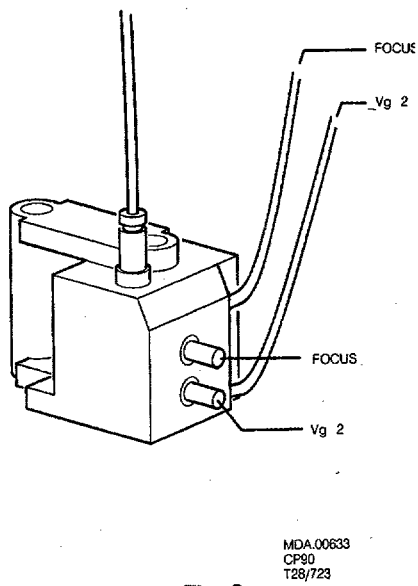


Fig. 8

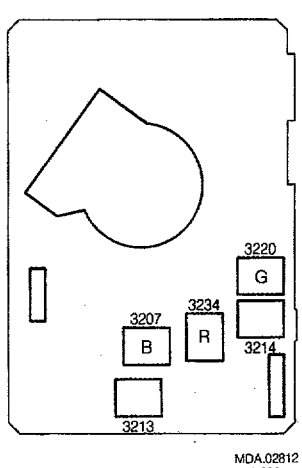


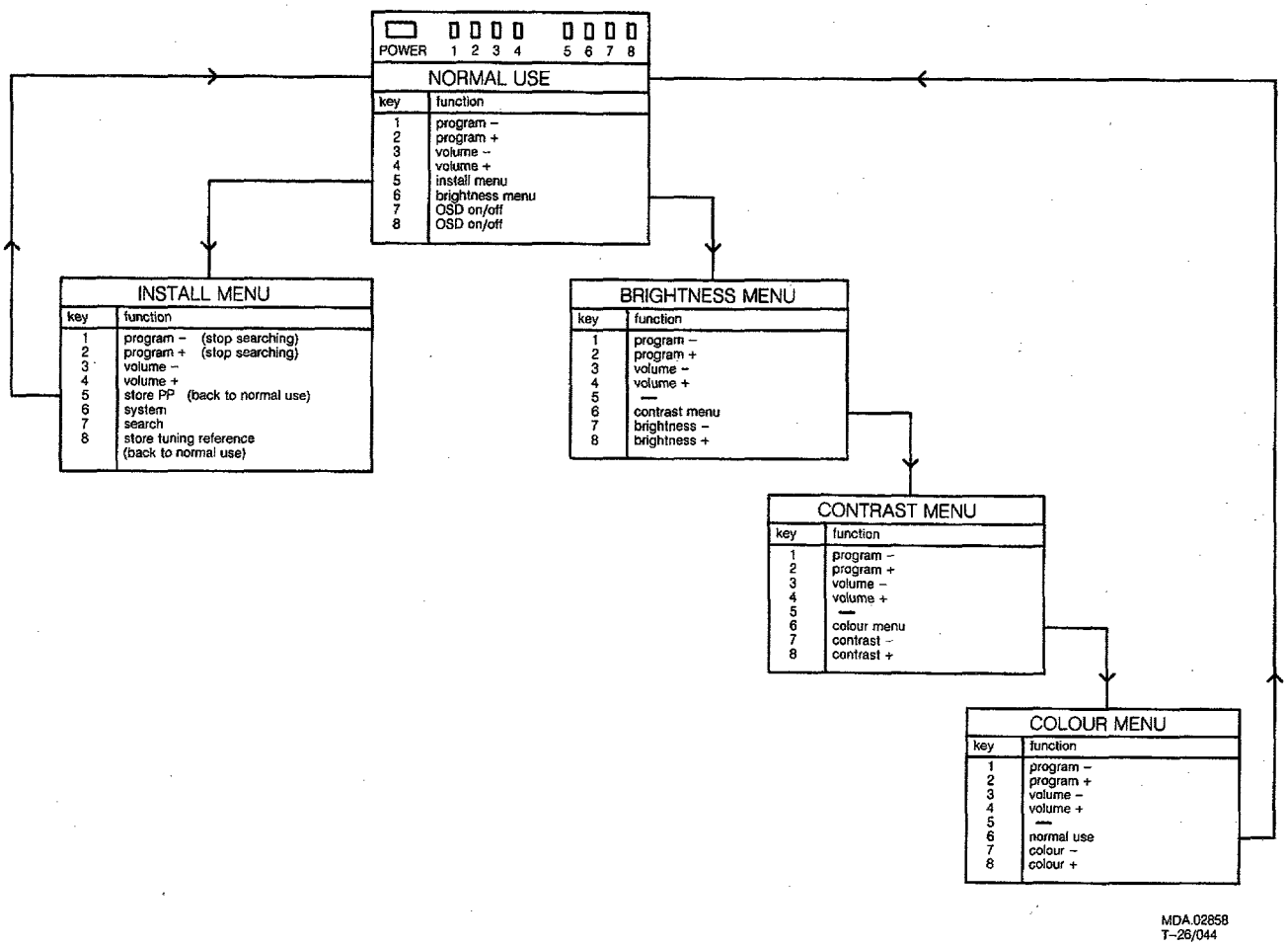
Fig. 9

Quick diagnose reference

ERROR MESSAGE	ERROR DESCRIPTION	POSSIBLE DEFECTIVE COMPONENT
Flashing LED	Internal µC error	IC7600
F4 on the screen	EEPROM error	IC7685

Operating instructions

1. Local keyboard operation



* **Switching on the hotel mode**
Select program number 38.
Hold key 5 depressed while pressing key 1.
Now the volume control is limited to a pre-set maximum and the installation menu can no longer be displayed.

* **Switching off the hotel mode**
Select program number 38.
Hold key 5 depressed while pressing key 7.
Now the set can be operated normally again.

2. Connections via the EURO connector

2.1 CVBS sources

If a CVBS source (e.g. a video recorder) is connected to the EURO connector, this source should generate a CVBS status signal at pin 8 of the EURO connector.

2.2 RGB sources

If an RGB source (e.g. a laser disc player) is connected to the EURO connector, this source should generate both a CVBS status signal at pin 8 and an RGB signal at pin 16 of the EURO connector.

Spare parts lists Stückliste Liste

Mono carrier

	4822 267 60243	EURO CONN.
	4822 267 31292	JACK 3.5mm
	4822 265 30389	2P FOR M1
	4822 265 40596	2P FOR M2
	4822 267 40666	3P FOR M3
	4822 264 40207	3P FOR M4
	4822 265 40421	6P FOR M5

Various

	4822 276 12597	SWITCH SK1
	4822 466 82782	SHIELD FOR 7600
	4822 277 21438	SWITCH 0025
	4822 276 40414	SWITCH 0024
	4822 256 30274	FUSE HOLDER
	4822 255 40955	LED HOLDER
	4822 492 70559	SPRING 7525
	4822 492 70559	SPRING 7445
1001	4822 210 10405	UV917E
1001	4822 210 10421	U743/IEC
1015	4822 242 72212	OFWG3950
1015	4822 242 70936	OFWJ1952
1015	4822 242 72374	OFWG1961
1032	4822 242 72211	TPS 5,5MW
1033	4822 153 30025	6,0MHz
1033	4822 242 71375	TP6,5MB
1135	4822 242 70714	SFT5,5MBF
1135	4822 242 71841	SFT6,0MA
1136	4822 242 71713	SFE6,0MBF
1136	4822 242 72057	SFE6,5MB
1272	4822 242 70304	8,867 238 MHz
1500	4822 070 32002	218002,(2A)
1540	4822 253 10064	19372(0,4A)
1679	4822 242 70831	CSA4,00MG
1685	4822 218 20981	LTM8848A-1

2001	4822 124 40198	470µF 20% 16V
2005	4822 121 51252	470nF 5% 63V
2006	4822 122 32863	22nF 80% 50V
2007	4822 124 40242	1µF 20% 63V
2010	4822 122 31769	18pF 5% 50V
2011	4822 122 31769	18pF 5% 50V
2013	4822 122 31769	18pF 5% 50V
2014	4822 122 31784	4,7nF 10% 50V
2015	4822 124 40199	680µF 20% 16V
2016	4822 122 32893	100nF 80% 50V
2017	4822 124 40195	150µF 20% 16V
2017	4822 124 41643	100µF 20% 16V
2018	4822 122 31916	5,6nF 10% 63V
2019	4822 122 32891	68nF 10% 63V
2020	4822 124 41576	2,2µF 20% 50V
2025	4822 124 41578	6,8µF 20% 50V
2026	4822 122 32863	22nF 80% 50V
2027	4822 122 32863	22nF 80% 50V
2030	4822 122 32863	22nF 80% 50V
2038	4822 122 32863	22nF 80% 50V
2041	4822 122 31784	4,7nF 10% 50V
2043	4822 122 31784	4,7nF 10% 50V
2044	4822 122 31784	4,7nF 10% 50V
2101	4822 122 32507	6,8pF 5% 50V
2102	4822 122 32082	4,7pF 5% 50V
2104	4822 122 31781	1500pF 10% 50V
2110	4822 122 31972	39pF 5% 50V
2115	4822 126 11206	430pF 5% 50V
2117	4822 122 31784	4,7nF 10% 50V
2118	4822 122 32765	820pF 10% 63V
2120	4822 126 11206	430pF 5% 50V
2124	4822 124 40435	10µF 20% 50V
2125	4822 122 32863	22nF 80% 50V
2126	4822 124 41577	4,7µF 20% 50V

2127	4822 124 41576	2,2µF 20% 50V
2128	4822 124 40435	10µF 20% 50V
2136	4822 121 43808	22nF 10% 100V
2137	4822 124 40193	68µF 20% 16V
2138	4822 121 51231	820pF 1% 400V
2138	4822 121 43066	1nF 2% 400V
2139	4822 121 51231	820pF 1% 400V
2140	4822 122 32863	22nF 80% 50V
2142	4822 122 32863	22nF 80% 50V
2143	4822 122 32863	22nF 80% 50V
2145	4822 122 32863	22nF 80% 50V
2146	4822 122 32863	22nF 80% 50V
2147	5322 121 42491	47nF 5% 100V
2148	4822 122 32856	8,2nF 10% 63V
2149	5322 121 42491	47nF 5% 100V
2150	4822 124 41576	2,2µF 20% 50V
2152	4822 124 40242	1µF 20% 63V
2153	4822 122 31784	4,7nF 10% 50V
2154	4822 122 31784	4,7nF 10% 50V
2155	4822 124 40242	1µF 20% 63V
2157	4822 124 41525	100µF 20% 25V
2158	4822 122 32863	22nF 80% 50V
2160	4822 124 41525	100µF 20% 25V
2161	4822 124 41525	100µF 20% 25V
2162	4822 122 33401	10nF 80% 63V
2169	4822 122 31972	39pF 5% 50V
2170	4822 122 32862	10nF 80% 50V
2171	4822 122 31784	4,7nF 10% 50V
2172	4822 122 32893	100nF 80% 50V
2174	4822 122 31768	180pF 5% 50V
2175	4822 122 31781	1500pF 10% 50V
2176	4822 122 32862	10nF 80% 50V
2255	4822 122 32893	100nF 80% 50V
2256	4822 122 31825	27pF 10% 50V
2257	4822 122 31766	120pF 5% 50V
2258	4822 122 31775	680pF 5% 50V
2259	4822 122 31766	120pF 5% 50V
2260	4822 122 31768	180pF 5% 50V
2261	4822 122 31825	27pF 10% 50V
2262	4822 122 32862	10nF 80% 50V
2263	4822 124 40242	1µF 20% 63V
2264	4822 122 32862	10nF 80% 50V
2265	4822 125 50045	20pF
2266	4822 122 32862	10nF 80% 50V
2267	4822 122 32893	100nF 80% 50V
2268	5322 122 31641	47nF 50V
2269	4822 122 32863	22nF 80% 50V
2270	4822 124 41525	100µF 20% 25V
2271	4822 122 32863	22nF 80% 50V
2272	5322 122 31647	1nF 10% 63V
2273	5322 122 31647	1nF 10% 63V
2274	4822 122 32862	10nF 80% 50V
2275	5322 122 31641	47nF 50V
2277	4822 124 40849	330µF 20% 16V
2279	4822 122 32862	10nF 80% 50V
2280	4822 122 32862	10nF 80% 50V
2281	4822 122 32863	22nF 80% 50V
2282	4822 122 32863	22nF 80% 50V
2283	4822 122 32863	22nF 80% 50V
2289	4822 122 32863	22nF 80% 50V
2290	4822 122 32863	22nF 80% 50V
2291	4822 122 32862	10nF 80% 50V
2292	4822 122 32862	10nF 80% 50V
2293	4822 122 32862	10nF 80% 50V
2294	4822 122 32863	22nF 80% 50V
2300	4822 122 31765	100pF 5% 50V
2301	4822 122 31965	220pF 5% 63V
2302	4822 122 31965	220pF 5% 63V
2303	4822 122 32862	10nF 80% 50V
2304	4822 122 32862	10nF 80% 50V
2305	4822 122 31825	27pF 10% 50V
2306	4822 122 31825	27pF 10% 50V
2307	4822 122 31766	120pF 5% 50V
2309	4822 122 32863	22nF 80% 50V

2310	4822 122 32893	100nF 80% 50V
2350	4822 122 32891	68nF 10% 63V
2351	4822 124 40435	10µF 20% 50V
2352	4822 122 31808	150pF 10% 50V
2353	4822 121 41854	150nF 5% 63V
2354	5322 121 42661	330nF 5% 63V
2355	4822 121 42937	2,7nF 1% 250V
2356	4822 122 32863	22nF 80% 50V
2359	5322 122 31842	330pF 5% 63V
2364	4822 121 42408	220nF 5% 63V
2366	4822 122 32597	6,8nF 10% 63V
2370	4822 124 40767	33µF 100 V
2371	4822 122 32863	22nF 80% 50V
2401	4822 122 31771	390pF 5% 50V
2402	4822 122 32542	47nF 10% 63V
2404	4822 124 40432	1500µF 20% 25V
2405	4822 124 41678	22µF 20% 25V
2414	4822 122 31644	2,2nF 10% 63V
2415	4822 124 41678	22µF 20% 25V
2416	4822 122 32542	47nF 10% 63V
2417	4822 124 41859	330µF 20% 35V
2440	5322 122 31842	330pF 5% 63V
2442	4822 122 40112	560pF 20% 500V
2443	4822 124 40196	220µF 20% 16V
2444	4822 121 43139	180nF 10% 100V
2445	4822 122 33467	1,5nF 10% R 2kV
2446	5322 121 42523	8,2nF 5% 2kV
2447	4822 121 42004	10nF 10% 400V
2448	4822 124 41056	47µF 50% 200V
2450	4822 121 42442	560nF 5% 200V
2451	5322 124 40641	10µF 20% 100V
2452	4822 124 41677	680µF 20% 25V
2453	4822 124 41859	330µF 20% 35V
2460	4822 121 51385	33nF 20% 100V
2465	4822 122 31839	82pF 10% 50V
2470	4822 124 42103	22µF 20% 200V
2500	4822 124 41531	470nF 10% 250V
2502	4822 126 11141	2,2nF 10% 1kV
2504	4822 126 11141	2,2nF 10% 1kV
2505	4822 124 42104	68µF 20% 385V
2506	4822 126 11137	3,3nF 20% 400V
2507	5322 121 41977	47nF 5% 250V
2511	4822 122 31808	150pF 10% 50V
2514	4822 122 31961	68pF 5% 63V
2515	4822 122 31961	68pF 5% 63V
2517	5322 121 42498	680nF 5% 63V
2520	4822 122 32891	68nF 10% 63V
2522	4822 122 31746	1000pF 5% 50V
2523	4822 122 31746	1000pF 5% 50V
2524	4822 126 11208	680pF 10% 1kV
2525	4822 126 11207	220pF 10% 1kV
2530	4822 124 41056	47µF 50% 200V
2532	4822 122 32585	470pF 10% 500V
2534	4822 126 11209	1,5nF 10% 1kV
2540	4822 124 41677	680µF 20% 25V
2545	4822 124 41577	4,7µF 20% 50V
2547	4822 122 31746	1000pF 5% 50V
2550	4822 121 42786	33 nF 2% 100V
2553	4822 122 31727	470pF 5% 63V
2554	4822 122 31174	2,7nF 10% 500V
2555	4822 122 32863	22nF 80% 50V
2556	4822 122 31784	4,7nF 10% 50V
2560	4822 124 41677	680µF 20% 25V
2561	4822 124 41678	22µF 20% 25V
2562	4822 122 31727	470pF 5% 63V
2563	4822 122 31727	470pF 5% 63V
2573	4822 122 31772	47pF 5% 50V
2602	4822 124 40435	10µF 20% 50V
2606	4822 122 31974	820pF 10% 63V
2610	4822 121 41673	220nF 10% 100V
2611	4822 121 41673	220nF 10% 100V
2615	4822 122 31765	100pF 5% 50V
2623	4822 124 40242	1µF 20% 63V

2624	4822 124 41577	4,7µF 20% 50V
2625	4822 122 32765	820pF 10% 63V
2629	4822 124 40435	10µF 20% 50V
2630	4822 124 41576	2,2µF 20% 50V
2651	4822 122 31974	820pF 10% 63V
2658	4822 122 31974	820pF 10% 63V
2660	5322 122 31647	1nF 10% 63V
2666	4822 124 41525	100µF 20% 25V
2669	5322 122 31842	330pF 5% 63V
2676	4822 122 31768	180pF 5% 50V
2677	4822 122 31971	10pF 10% 50V
2678	4822 122 31971	10pF 10% 50V
2679	4822 122 31839	82pF 10% 50V
2680	4822 122 31825	27pF 10% 50V
2681	4822 122 31825	27pF 10% 50V
2682	4822 122 31765	100pF 5% 50V
2685	4822 124 41525	100µF 20% 25V
2686	4822 122 32863	22nF 80% 50V
2690	4822 122 32863	22nF 80% 50V
2695	4822 122 31974	820pF 10% 63V
2696	4822 122 31974	820pF 10% 63V
2697	4822 122 31974	820pF 10% 63V
2698	4822 122 31974	820pF 10% 63V
2850	4822 122 31727	470pF 5% 63V
2852	4822 122 31727	470pF 5% 63V
2860	4822 122 31784	4,7nF 10% 50V
2876	4822 124 40435	10µF 20% 50V

3001	4822 052 10229	22Ω0 5% 0,33W
3002	4822 051 10272	2k70 2% 0,25W
3004	4822 051 10008	0Ω0 5% 0,25W
3005	4822 051 10008	0Ω0 5% 0,25W
3010	4822 051 10569	56Ω0 2% 0,25W
3011	4822 051 10562	5k60 2% 0,25W
3012	4822 051 10562	5k60 2% 0,25W
3015	4822 052 10109	10Ω0 5% 0,33W
3017	4822 116 52256	2k2 5% 0,5W
3018	4822 051 10103	10k0 2% 0,25W
3019	4822 051 10562	5k60 2% 0,25W
3020	4822 051 10829	82Ω0 2% 0,25W
3021	4822 100 11392	47k LIN,
3022	4822 051 10472	4k70 2% 0,25W
3023	4822 051 10394	390k0 2% 0,25W
3024	4822 051 10472	4k70 2% 0,25W
3025	4822 051 10472	4k70 2% 0,25W
3026	4822 051 10101	100Ω0 2% 0,25W
3027	4822 051 10221	220Ω0 2% 0,25W
3028	4822 051 10152	1k50 2% 0,25W
3029	4822 051 10152	1k50 2% 0,25W
3030	4822 051 10221	220Ω0 2% 0,25W
3031	4822 051 10331	330Ω0 2% 0,25W
3032	4822 051 10181	180Ω0 2% 0,25W
3033	4822 051 10182	1k80 2% 0,25W
3034	4822 051 10103	10k0 2% 0,25W
3035	4822 051 10008	0Ω0 5% 0,25W
3036	4822 051 10008	0Ω0 5% 0,25W
3037	4822 051 10008	0Ω0 5% 0,25W
3038	4822 051 10393	39k0 2% 0,25W
3039	4822 051 10393	39k0 2% 0,25W
3043	4822 051 10103	10k0 2% 0,25W
3044	4822 116 52233	10k 5% 0,5W
3049	4822 051 10683	68k0 2% 0,25W
3050	4822 051 10332	3k30 2% 0,25W
3051	4822 051 10223	22k0 2% 0,25W
3101	4822 051 10008	0Ω0 5% 0,25W
3102	4822 051 10008	0Ω0 5% 0,25W
3103	4822 051 10008	0Ω0 5% 0,25W
3116	4822 051 10105	1M0 5% 0,25W
3117	4822 051 10152	1k50 2% 0,25W
3118	4822 051 10682	6k80 2% 0,25W
3119	4822 051 10681	680Ω0 2% 0,25W
3120	4822 051 10105	1M0 5% 0,25W

3124	4822 052 10229	22Ω0 5% 0,33W
3127	4822 051 10152	1k50 2% 0,25W
3135	4822 051 10621	620Ω0 2% 0,25W
3136	4822 053 11181	180Ω0 5% 2W
3137	4822 051 10008	0Ω0 5% 0,25W
3138	4822 051 20222	2k20 5% 0,1W
3139	4822 051 10008	0Ω0 5% 0,25W
3140	4822 051 10008	0Ω0 5% 0,25W
3141	4822 051 10332	3k30 2% 0,25W
3142	4822 051 10008	0Ω0 5% 0,25W
3143	4822 051 10102	1k0 2% 0,25W
3148	4822 051 10273	27k0 2% 0,25W
3149	4822 051 10273	27k0 2% 0,25W
3150	4822 051 10104	100k0 2% 0,25W
3151	4822 051 10008	0Ω0 5% 0,25W
3152	4822 051 10562	5k60 2% 0,25W
3154	4822 051 10472	4k70 2% 0,25W
3155	4822 051 10103	10k0 2% 0,25W
3156	4822 051 10008	0Ω0 5% 0,25W
3157	4822 050 21003	10k0 1% 0,6W
3158	4822 051 10122	1k20 2% 0,25W
3159	4822 052 11208	2Ω0 5% 0,5W
3160	4822 051 10689	68Ω0 2% 0,25W
3161	4822 051 10689	68Ω0 2% 0,25W
3162	4822 051 10104	10k0 2% 0,25W
3163	4822 052 11208	2Ω0 5% 0,5W
3169	4822 051 10621	620Ω0 2% 0,25W
3170	4822 051 10473	47k0 2% 0,25W
3171	4822 116 52283	4k7 5% 0,5W
3172	4822 051 10472	4k70 2% 0,25W
3173	4822 051 10621	620Ω0 2% 0,25W
3175	4822 051 10102	1k0 2% 0,25W
3251	4822 051 10162	1k60 2% 0,25W
3252	4822 051 10911	910Ω0 2% 0,25W
3253	4822 051 10751	750Ω0 2% 0,25W
3289	4822 051 10682	6k80 2% 0,25W
3296	4822 111 30508	10Ω 5% 0,33W
3303	4822 051 10331	330Ω0 2% 0,25W
3304	4822 051 10331	330Ω0 2% 0,25W
3305	4822 116 90536	120Ω 1% 0,125W
3306	4822 051 10332	3k30 2% 0,25W
3307	4822 051 10103	10k0 2% 0,25W
3308	4822 116 52233	10k 5% 0,5W
3309	4822 051 10105	1M0 5% 0,25W
3310	4822 051 10561	560Ω0 2% 0,25W
3311	4822 051 10102	1k0 2% 0,25W
3313	4822 051 10473	47k0 2% 0,25W
3314	4822 051 10682	6k80 2% 0,25W
3315	4822 051 10473	47k0 2% 0,25W
3316	4822 051 10473	47k0 2% 0,25W
3317	4822 051 10472	4k70 2% 0,25W
3318	4822 051 10472	4k70 2% 0,25W
3319	4822 051 10681	680Ω0 2% 0,25W
3320	4822 101 10927	470Ω
3321	4822 116 52256	2k2 5% 0,5W
3322	4822 051 10008	0Ω0 5% 0,25W
3350	4822 051 10823	82k0 2% 0,25W
3351	4822 116 52249	1k8 5% 0,5W
3353	4822 051 10823	82k0 2% 0,25W
3354	4822 100 11163	100k LIN 0,1W
3355	4822 116 52264	27k 5% 0,5W
3356	4822 100 11141	10k TRIM
3357	4822 051 10152	1k50 2% 0,25W
3358	4822 051 10473	47k0 2% 0,25W
3359	4822 051 10272	2k70 2% 0,25W
3360	4822 051 10008	0Ω0 5% 0,25W
3361	4822 051 10008	0Ω0 5% 0,25W
3362	4822 051 10101	100Ω0 2% 0,25W
3363	4822 051 10008	0Ω0 5% 0,25W
3364	4822 051 10364	360k0 2% 0,25W
3365	4822 116 81682	2M2 5% 0,5W
3370	4822 052 11471	470Ω0 5% 0,5W
3401	4822 116 52259	2k4 5% 0,5W

3402	4822 116 52222	390Ω 5% 0,5W
3403	4822 116 52269	3k3 5% 0,5W
3403	4822 116 52276	3K9 5% 0,5W
3404	4822 051 10202	2k0 2% 0,25W
3404	5322 111 90282	2K4 2% 0,25W
3405	4822 051 10131	130Ω0 2% 0,25W
3405	4822 051 10151	150Ω 2% 0,25W
3406	4822 051 10123	12k0 2% 0,25W
3406	4822 051 10153	15K 2% 0,25W
3407	4822 051 20183	18k0 5% 0,1W
3407	4822 051 10223	22K 2% 0,25W
3408	4822 116 52259	2k4 5% 0,5W
3409	4822 051 10008	0Ω0 5% 0,25W
3410	4822 100 11658	330Ω LIN 0,1W
3411	4822 116 81801	3Ω6 5% 0,5W
3411	4822 116 82721	4Ω3 5% 0,5W
3412	4822 116 81801	3Ω6 5% 0,5W
3412	4822 116 82721	4Ω3 5% 0,5W
3413	4822 051 10273	27k0 2% 0,25W
3414	4822 051 10008	0Ω0 5% 0,25W
3415	4822 116 52253	2k 5% 0,5W
3416	4822 116 52253	2k 5% 0,5W
3417	4822 051 10008	0Ω0 5% 0,25W
3418	4822 051 10008	0Ω0 5% 0,25W
3440	4822 116 52199	68Ω 5% 0,5W
3442	4822 051 10562	5k60 2% 0,25W
3443	4822 113 80454	4Ω7 10% 5W
3444	4822 053 11562	5k60 5% 2W
3445	4822 051 10689	68Ω0 2% 0,25W
3447	4822 052 11181	180Ω0 5% 0,5W
3448	4822 052 10108	1Ω0 5% 0,33W
3449	4822 052 10108	1Ω0 5% 0,33W
3451	4822 051 10333	33k0 2% 0,25W
3452	4822 111 30508	10Ω 5% 0,33W
3453	4822 052 11181	180Ω0 5% 0,5W
3454	4822 052 11102	1K0 5% 0,5W
3455	4822 051 20183	18k0 5% 0,1W
3456	4822 053 20434	430k0 5% 0,25W
3460	4822 051 10113	11k0 2% 0,25W
3465	4822 051 20185	1M80 5% 0,1W
3470	4822 052 10478	4Ω70 5% 0,33W
3501	4822 116 40137	PTC/PTC
3504	4822 053 21106	10M0 5% 0,5W
3509	4822 116 52287	51k 5% 0,5W
3510	4822 116 52287	51k 5% 0,5W
3511	4822 051 10102	1k0 2% 0,25W
3513	4822 051 10104	100k0 2% 0,25W
3514	4822 116 52278	390k 5% 0,5W
3515	4822 051 10471	470Ω0 2% 0,25W
3516	4822 051 10101	100Ω0 2% 0,25W
3517	4822 116 52206	120Ω 5% 0,5W
3518	4822 051 10224	220k0 2% 0,25W
3520	4822 051 10183	18k0 2% 0,25W
3521	4822 053 11209	20Ω0 5% 2W
3522	4822 053 11209	20Ω0 5% 2W
3523	4822 051 10229	22Ω0 2% 0,25W
3525	4822 053 11339	33Ω0 5% 2W
3526	4822 116 52206	120Ω 5% 0,5W
3530	4822 053 11569	56Ω0 5% 2W
3533	4822 050 14873	48k70 1% 0,4W
3534	4822 051 10332	3k30 2% 0,25W
3535	4822 100 20168	1k 10% LIN 0,05W
3544	4822 052 10108	1Ω0 5% 0,33W
3547	4822 050 11002	1k0 1% 0,4W
3549	4822 051 10479	47Ω0 2% 0,25W
3550	4822 051 10911	910Ω0 2% 0,25W
3551	4822 051 10151	150Ω0 2% 0,25W
3552	4822 051 10101	100Ω0 2% 0,25W
3553	4822 051 10681	680Ω0 2% 0,25W
3554	4822 053 11689	68Ω0 5% 2W
3555	4822 051 10101	100Ω0 2% 0,25W
3556	4822 051 10681	680Ω0 2% 0,25W
3557	4822 053 11271	270Ω0 5% 2W

3558	4822 051 10101	100Ω0 2% 0,25W
3560	4822 051 10101	100Ω0 2% 0,25W
3561	4822 116 52219	330Ω 5% 0,5W
3562	4822 051 10271	270Ω0 2% 0,25W
3563	4822 051 10101	100Ω0 2% 0,25W
3565	4822 051 10103	10k0 2% 0,25W
3566	4822 051 20183	18k0 5% 0,1W
3567	4822 051 20183	18k0 5% 0,1W
3568	4822 053 11681	680Ω0 5% 2W
3569	4822 116 52215	220Ω 5% 0,5W
3570	4822 116 52257	22k 5% 0,5W
3571	4822 051 10471	470Ω0 2% 0,25W
3572	4822 116 52202	82Ω 5% 0,5W
3573	4822 116 52284	47k 5% 0,5W
3574	4822 051 10104	100k0 2% 0,25W
3591	4822 051 10008	0Ω0 5% 0,25W
3593	4822 051 10008	0Ω0 5% 0,25W
3601	4822 051 10103	10k0 2% 0,25W
3602	4822 051 10822	8k20 2% 0,25W
3603	4822 050 12403	24k0 1% 0,4W
3604	4822 051 10151	150Ω0 2% 0,25W
3605	4822 050 12204	220k0 1% 0,4W
3606	4822 116 52233	10k 5% 0,5W
3607	4822 051 10332	3k30 2% 0,25W
3610	4822 051 10153	15k0 2% 0,25W
3611	4822 051 10103	10k0 2% 0,25W
3612	4822 051 10103	10k0 2% 0,25W
3613	4822 051 10434	430k0 2% 0,25W
3614	4822 051 10472	4k70 2% 0,25W
3615	4822 051 10824	820k0 2% 0,25W
3616	4822 116 52284	47k 5% 0,5W
3618	4822 051 20183	18k0 5% 0,1W
3620	4822 051 10433	43k0 2% 0,25W
3621	4822 051 10393	39k0 2% 0,25W
3622	4822 116 52234	100k 5% 0,5W
3623	4822 116 52247	16k 5% 0,5W
3624	4822 051 10393	39k0 2% 0,25W
3625	4822 051 10163	16k0 2% 0,25W
3626	4822 116 52251	18k 5% 0,5W
3627	4822 051 20183	18k0 5% 0,1W
3628	4822 051 10393	39k0 2% 0,25W
3630	4822 051 10274	270k0 2% 0,25W
3631	4822 116 52275	360k 5% 0,5W
3651	4822 051 10103	10k0 2% 0,25W
3652	4822 116 52207	1k2 5% 0,5W
3653	4822 116 52207	1k2 5% 0,5W
3654	4822 051 10102	1k0 2% 0,25W
3655	4822 051 10562	5k60 2% 0,25W
3656	4822 051 10112	1k10 2% 0,25W
3657	4822 051 10683	68k0 2% 0,25W
3658	4822 051 10272	2k70 2% 0,25W
3659	4822 051 10112	1k10 2% 0,25W
3660	4822 116 52226	560Ω 5% 0,5W
3661	4822 116 52204	1k 5% 0,5W
3662	4822 051 10008	0Ω0 5% 0.25W
3663	4822 051 10151	150Ω0 2% 0,25W
3664	4822 116 52296	6k8 5% 0,5W
3665	4822 116 52204	1k 5% 0,5W
3666	4822 051 10151	150Ω0 2% 0,25W
3667	4822 116 52233	10k 5% 0,5W
3668	4822 051 10433	43k0 2% 0,25W
3669	4822 051 10153	15k0 2% 0,25W
3670	4822 116 52233	10k 5% 0,5W
3671	4822 051 10103	10k0 2% 0,25W
3672	4822 051 10102	1k0 2% 0,25W
3673	4822 051 10103	10k0 2% 0,25W
3674	4822 116 52204	1k 5% 0,5W
3676	4822 116 52233	10k 5% 0,5W
3678	4822 051 10008	0Ω0 5% 0,25W
3679	4822 051 20222	2k20 5% 0,1W
3680	4822 051 10008	0Ω0 5% 0,25W
3682	4822 051 10008	0Ω0 5% 0,25W
3683	4822 051 10008	0Ω0 5% 0,25W
3684	4822 051 10332	3k30 2% 0,25W

3685	4822 051 10332	3k30 2% 0,25W
3686	4822 051 10102	1k0 2% 0,25W
3687	4822 051 10102	1k0 2% 0,25W
3688	4822 050 12403	24k0 1% 0,4W
3689	4822 051 10104	100k0 2% 0,25W
3692	4822 116 52204	1k 5% 0,5W
3693	4822 116 52284	47k 5% 0,5W
3695	4822 051 10101	100Ω0 2% 0,25W
3696	4822 051 10101	100Ω0 2% 0,25W
3697	4822 051 10101	100Ω0 2% 0,25W
3698	4822 116 52175	100Ω 5% 0,5W
3699	4822 051 10472	4k70 2% 0,25W
3850	4822 051 10103	10k0 2% 0,25W
3851	4822 116 80747	75Ω 5% 0,125W
3852	4822 051 10103	10k0 2% 0,25W
3853	4822 116 80747	75Ω 5% 0,125W
3854	4822 051 10008	0Ω0 5% 0,25W
3855	4822 116 80747	75Ω 5% 0,125W
3856	4822 051 10008	0Ω0 5% 0,25W
3857	4822 051 10008	0Ω0 5% 0,25W
3858	4822 116 80747	75Ω 5% 0,125W
3859	4822 051 10008	0Ω0 5% 0,25W
3860	4822 051 10471	470Ω0 2% 0,25W
3862	4822 116 52256	2k2 5% 0,5W
3865	4822 116 82719	56Ω 5% 0,125W
3866	4822 116 82718	18Ω 5% 0,125W
3871	4822 116 52215	220Ω 5% 0,5W
3875	4822 116 52196	51Ω 5% 0,5W
3876	4822 051 10332	3k30 2% 0,25W
3879	4822 051 10103	10k0 2% 0,25W
3901	4822 051 10008	0Ω0 5% 0,25W
3902	4822 051 10008	0Ω0 5% 0,25W

5010	4822 157 62552	2µH2
5028	4822 157 63068	0.28µH
5030	4822 157 60123	6µH8
5032	4822 157 62767	8µH
5040	4822 157 63064	0.19µH
5040	4822 157 63071	0.30µH
5043	4822 157 63069	0.70µH
5138	4822 157 53635	10k 0,75µH 6%
5139	4822 157 53635	10K 0,75µH 6%
5177	4822 157 52333	COIL 100µH
5250	4822 157 50961	22µH
5251	4822 320 40235	DELAY LINE
5258	4822 157 51462	10µH
5259	4822 157 52808	10µH
5284	4822 157 60141	3µH3
5285	4822 157 60141	3µH3
5286	4822 157 60141	3µH3
5296	4822 157 51462	10µH
5320	4822 157 52808	10µH
5440	4822 157 52983	2N2
5441	4822 146 21116	LOT DRIVER
5443	4822 157 51462	10µH
5445	4822 140 10406	L.O.T.
5447	4822 157 62766	262LYF-0095k
5449	4822 156 20966	47 µH
5452	4822 157 51157	3,3µH
5453	4822 157 51462	10µH
5454	4822 156 21332	LIN. COIL
5470	4822 157 51462	10µH
5500	4822 212 22978	MAINS FILTER
5503	4822 157 51235	4µH 7 10%
5515	4822 157 50963	2µH2
5519	4822 157 51235	4µH 7 10%
5521	4822 157 51195	1 µH
5524	4822 157 53542	1µH 2%
5525	4822 148 81121	SOPS TRF
5531	4822 158 10551	27µH
5532	4822 157 51157	3,3µH
5534	4822 157 62878	1µH

5540	4822 156 20966	47 µH
5541	4822 156 20966	47 µH
5545	4822 157 51195	1 µH
5554	4822 157 51157	3,3µH
5560	4822 157 51462	10µH
5601	4822 157 51462	10µH
5652	4822 157 51462	10µH
5653	4822 157 51462	10µH
5677	4822 157 53906	47µH

6014	4822 130 80888	BA682
6019	4822 130 80446	LL4148
6020	4822 130 80446	LL4148
6034	4822 130 80446	LL4148
6042	4822 130 80888	BA682
6050	4822 130 30621	1N4148
6051	4822 130 30621	1N4148
6052	4822 130 30621	1N4148
6053	4822 130 80446	LL4148
6115	4822 130 80888	BA682
6116	4822 130 80888	BA682
6119	4822 130 80888	BA682
6120	4822 130 80888	BA682
6135	4822 130 80883	LLZ-C4V7
6170	4822 130 80888	BA682
6172	4822 130 80888	BA682
6289	4822 130 80446	BAS32L
6306	4822 130 80954	LLZ-C5V6
6365	4822 130 80446	LL4148
6370	4822 130 82304	LLZ-F12
6415	4822 130 80446	LL4148
6416	4822 130 42488	BYD33D
6443	5322 130 31938	BYV27-200
6446	4822 130 32896	BYD33M
6449	4822 130 42488	BYD33D
6451	4822 130 42488	BYD33D
6452	4822 130 42488	BYD33D
6470	4822 130 42488	BYD33D
6502	4822 130 81497	1N4005GP
6503	4822 130 81497	1N4005GP
6504	4822 130 81497	1N4005GP
6505	4822 130 81497	1N4005GP
6511	4822 130 80446	LL4148
6513	4822 130 80446	LL4148
6514	4822 130 80446	LL4148
6515	4822 130 80446	LL4148
6516	4822 130 80886	LLZ-F22
6521	4822 130 42488	BYD33D
6522	4822 130 30621	1N4148
6523	4822 130 80446	LL4148
6530	4822 130 82033	BYD34J
6537	4822 130 34167	BZX79-F6V2
6540	4822 130 42488	BYD33D
6545	4822 130 42488	BYD33D
6549	4822 130 80446	LL4148
6554	4822 130 42489	BYD33G
6555	4822 130 82305	LLZ-F18
6557	4822 130 80887	LLZ-F36
6558	4822 130 80887	LLZ-F36
6559	4822 130 80887	LLZ-F36
6562	4822 130 80905	LLZ-F5V1
6565	4822 130 81252	LLZ-F4V7
6568	4822 130 81147	LLZ-F6V2
6569	4822 130 80446	LL4148
6570	4822 130 20245	SFOR5D43
6573	4822 130 80446	LL4148
6602	4822 130 82037	HZT33
6603	4822 130 80446	LL4148
6604	4822 130 80446	LL4148
6605	4822 130 80446	LL4148
6606	4822 130 80446	LL4148

6658	4822 130 80446	LL4148
6663	4822 130 33951	CQS51L-3
6679	4822 130 80446	LL4148
6849	4822 130 30621	1N4148
6850	4822 130 80446	LL4148
6851	4822 130 80446	LL4148
6852	4822 130 80446	LL4148
6853	4822 130 80446	LL4148
6854	4822 130 80446	LL4148
6855	4822 130 80446	LL4148
6865	4822 130 30621	1N4148
6880	4822 130 81147	LLZ-F6V2

7002	4822 209 10892	LA7910
7015	4822 209 63107	TDA4504B/N1B
7027	4822 130 61207	BC848
7030	4822 130 61207	BC848
7038	4822 130 61207	BC848
7125	4822 209 63105	TDA3843/V2
7135	4822 209 63217	TDA3827/V2
7156	4822 130 61207	BC848
7157	4822 209 60956	TDA7052/N1
7158	4822 130 61207	BC848
7170	4822 130 61207	BC848
7221	4822 209 63108	TDA4660/V2
7250	4822 209 63109	TDA4650/V3
7251	4822 130 61207	BC848
7255	5322 130 42136	BC848C
7256	4822 130 61207	BC848
7260	4822 209 70019	TDA4510/V2/S8
7280	4822 209 63104	TDA3504/V1
7400	4822 209 60955	TDA3653B/N1
7440	4822 130 41782	BF422
7445	4822 130 42679	BUT11AF
7512	5322 130 42136	BC848C
7514	4822 130 82034	CNX83A
7515	4822 130 42513	BC858C
7516	5322 130 44349	BC635
7525	4822 130 42679	BUT11AF
7537	5322 130 42136	BC848C
7552	4822 130 42155	BC327A
7553	5322 130 42012	BC858A
7554	4822 130 42032	BC337A
7555	5322 130 60159	BC846
7556	4822 130 60136	BC856
7561	4822 130 40823	BD135
7563	5322 130 42012	BC858
7571	4822 130 61207	BC848
7600	4822 310 31846	TMP47C434N3121
7605	4822 209 73852	PMBT2369
7654	4822 130 61207	BC848
7658	4822 130 61207	BC848
7665	4822 130 61207	BC848
7670	4822 130 61207	BC848
7672	4822 130 61207	BC848
7674	4822 130 61207	BC848
7685	4822 209 62098	ST24C02CP
7686	4822 130 61207	BC848
7875	4822 130 61207	BC848
7876	4822 130 61207	BC848

CRT-panel

	4822 255 70251	CRT SOCKET
	4822 265 30735	5 PINS
	4822 265 30734	6 PINS

2204	5322 122 31842	330pF 5% 63V
2206	4822 124 41828	1µF 20% 250V
2217	5322 122 31842	330pF 5% 63V
2230	5322 122 31842	330pF 5% 63V
2237	4822 121 41926	33nF 5% 630V

3202	4822 053 11123	12k0 5% 2W
3203	4822 111 50518	1k5 5% 0,5W
3204	4822 051 10229	22Ω0 2% 0,25W
3205	4822 051 10621	620Ω0 2% 0,25W
3206	4822 051 10112	1k10 2% 0,25W
3207	4822 100 11638	4k7 20% 0,1W
3210	4822 051 10332	3k30 2% 0,25W
3211	4822 051 10332	3k30 2% 0,25W
3212	4822 051 10332	3k30 2% 0,25W
3213	4822 100 11637	2k2 20% 0,1W
3214	4822 100 11637	2k2 20% 0,1W
3215	4822 053 11123	12k0 5% 2W
3216	4822 111 50518	1k5 5% 0,5W
3217	4822 051 10229	22Ω0 2% 0,25W
3218	4822 051 10621	620Ω0 2% 0,25W
3219	4822 051 10112	1k10 2% 0,25W
3220	4822 100 11638	4k7 20% 0,1W
3222	4822 051 10561	560Ω0 2% 0,25W
3224	4822 051 10152	1k50 2% 0,25W
3225	4822 051 10432	4k30 2% 0,25W
3226	4822 051 10112	1k10 2% 0,25W
3227	4822 051 10102	1k0 2% 0,25W
3228	4822 053 11123	12k0 5% 2W
3229	4822 111 50518	1k5 5% 0,5W
3230	4822 051 10229	22Ω0 2% 0,25W
3232	4822 051 10621	620Ω0 2% 0,25W
3233	4822 051 10112	1k10 2% 0,25W
3234	4822 100 11638	4k7 20% 0,1W
3235	4822 052 10108	1Ω0 5% 0,33W
3236	4822 111 50518	1k5 5% 0,5W
3237	4822 111 50518	1k5 5% 0,5W

5235	4822 157 50965	15µH

6205	4822 130 80446	BAS32L
6218	4822 130 80446	BAS32L
6227	4822 130 80446	BAS32L

7205	4822 130 41782	BF422
7218	4822 130 41782	BF422
7225	5322 130 42012	BC858A
7227	4822 130 41782	BF422